

A-SV810PRO

A/V Surround Integrated Amplifier

Instruction Manual

• Congratulations on your purchase of the ONKYO A-SV810PRO A/V Surround Integrated Amplifier. • Please read this manual thoroughly before making connections and turning power on. • Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new A-SV810PRO. • Please retain this manual for future reference.

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CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



- The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

- For models having power cords with a polarized plug.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- Sur les modèles dont la fiche est polarisée.

ATTENTION: POUR PRÉVENIR LES CHOCS ÉLECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉES À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Important Safeguards

1. Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Heed Warnings

All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions

All operating and use instructions should be followed.

5. Water and Moisture

The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

6. Carts and Stands

The appliance should be used only with a cart or stand that is recommended by the manufacturer.

7. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven

surfaces may cause the appliance and cart combination to overturn.



S3125A

8. Wall or Ceiling Mounting

The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

9. Ventilation

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

10. Heat

The appliance should be situated away from heat sources such as radiators, heat registers, stoves or other appliances (including amplifiers) that produce heat.

Precautions

1. Warranty Card

The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.

2. Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

3. AC Fuse

The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your Onkyo service center.

4. Care

From time to time you should wipe off the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water or a mild ammonia cleaner, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

11. Power Sources

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

12. Polarization

If the appliance is provided with a polarized plug having one blade wider than the other, please read the following information. The polarization of the plug is a safety feature. The polarized plug will only fit into the outlet one way. If the plug does not fit fully into the outlet, try reversing it. If there is still trouble, the user should seek the services of a qualified electrician. Under no circumstances should the user attempt to defeat the polarization of the plug.

13. Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

14. Cleaning

The appliance should be cleaned only as recommended by the manufacturer.

15. Non-use Periods

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

16. Object and Liquid Entry

Care should be taken so that objects do not fall onto the appliance and liquids are not spilled into the enclosure through openings.

17. Damages Requiring Service

The appliance should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged.
- B. Objects have fallen on, or liquid has been spilled into the appliance.
- C. The appliance has been exposed to rain.
- D. The appliance does not appear to operate normally or exhibits a marked change in performance.
- E. The appliance has been dropped or the enclosure damaged.

18. Servicing

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Memory Preservation

This unit does not require memory preservation batteries. A built-in memory back-up system preserves the contents of the memory even when the unit is unplugged. As long as the unit is plugged into the power supply, the memory is stored even if the power button is turned off.

The time that the memory will be preserved after the unit has been unplugged will be a few weeks on average. This varies depending on the climate and the placement of the unit, high humidity shortens the memory time after the unit has been unplugged.

Features

1. High Power for Top Performance

In surround sound mode, the A-SV810PRO supplies 85 watts per channel into 8 ohms to the front left or right or center channel. The rear receives 35 watts per channel into 8 ohms. The power amplifier block employs high-quality, discrete output stages for all five channels. A dedicated wide bandwidth video amplifier drives the video circuitry, making signal transfer fidelity equivalent to a horizontal resolution of 1,000 lines (13 MHz).

2. Dolby Pro Logic Surround Sound System

This system incorporates an "active decoder" configuration which is more sophisticated than the "passive" type found in conventional AV amplifiers. Dolby Pro Logic Surround's biggest feature is its directional enhancement or "steering" circuit. It increases separation between channels to improve sound localization and includes an active center channel. This results in pinpoint directionality, image stability and enhanced overall sound quality. For example, the voices of on-screen characters always seem to come directly from the TV and not from a side speaker. A built-in test tone generator makes it easy to set channel balance for optimum performance.

3. AI Fully Automatic Program System

Simply press one of the acoustic program preset buttons on the front panel to switch the power on and call up a variety of preset settings, including the input selector setting, volume level, surround mode and tone control settings. Up to 10 different setups can be stored in memory for recall. Naturally, the acoustic preset settings can also be recalled using the remote control.

4. Adjustable Digital Time Delay

15, 18, 21, 24, 27 and 30 milliseconds (with Dolby Pro Logic Surround)

5. Built-In Auto-Input Balance Circuit

It automatically adjusts the input signal balance when using Dolby Pro Logic Surround and theater surround.

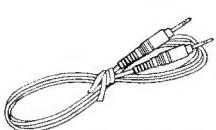
6. On-Screen Display Mode

It lets you confirm important settings on your TV screen.

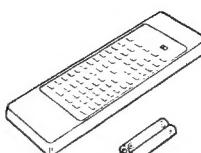
Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Before Using this Unit

Supplied Accessories

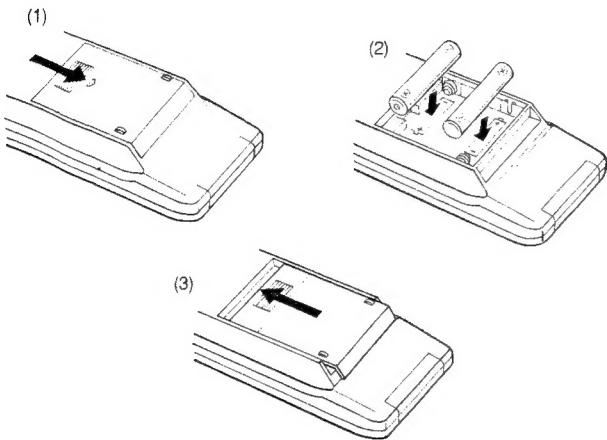


RI remote control cable x1



Remote control transmitter x1
Batteries x2

Transmitter Battery Insertion



Loading the Batteries

Remove the battery compartment cover by opening it as shown in the figure. Load two AAA (LR03) size batteries with the plus (+) and minus (-) terminals positioned as indicated by the diagram inside the battery compartment and close the cover.

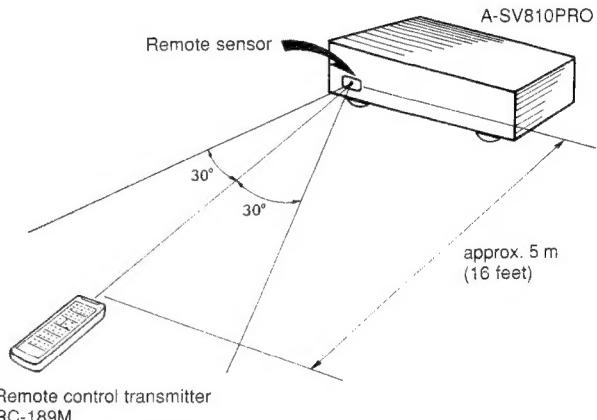
1. In case the batteries lose their power, all indicators will flash when any button is pressed.
2. Remove dead batteries immediately to avoid corrosion damage.
3. To avoid corrosion damage, never mix old batteries with new ones.
4. Learned codes are not lost even when the batteries are replaced. They may be lost, however, if battery replacement is not completed within 30 minutes. In this case, the unit must learn the codes again.

Notes

- The alkaline batteries supplied with this unit have a service life of approximately six months, depending on frequency of usage.
- The A-SV810PRO comes equipped with AAA (LR03) alkaline batteries. Although the battery life is shorter, you can also use AAA (R03U) manganese batteries, but never use one manganese battery and one alkaline battery at the same time.

Precautions

1. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of the A-SV810PRO is exposed to bright light. To prevent this from occurring, place the A-SV810PRO so that it is not directly exposed to a bright light.
2. If the A-SV810PRO is placed inside an audio rack behind a glass door, the door should not have colored glass or have any decorations on it since this could shorten the range or prevent commands from being received.
3. Use of other infrared remote control devices in the same room may cause interference.
4. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must always be pointed at the reception window when a command is sent to the A-SV810PRO.
5. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your Onkyo service center.



WARNING

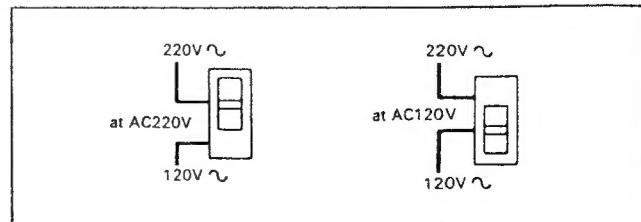
BEFORE CONNECTING THE UNIT TO AN AC OUTLET, READ THE FOLLOWING SECTION CAREFULLY.

- Some models are designed for use only with the power supply voltage of the region where they are sold.

USA & Canadian models: AC120V, 60Hz
Worldwide models: AC120V, 60Hz/
220V, 50Hz switchable.

• Voltage Selector (Rear Panel)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the power. Voltage is changed by sliding the groove in the switch with a screwdriver to the up or down. Confirm that the switch has been moved all the way to the up or down before plugging in the power. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.



Connections

First read the instruction manuals for the equipment to be connected.

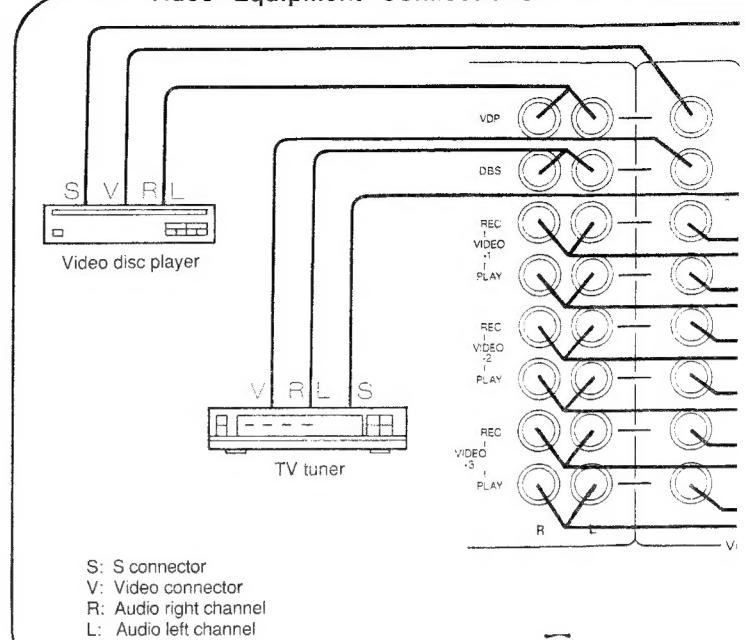
Precautions

1. Complete all equipment connections before plugging into an AC power source.
2. Carefully connect the L (left), R (right) and V (video) connection cables as indicated in the figure.
3. Since sound quality can be adversely affected, do not bundle the cables with the AC cord or speaker cables. Route the cables away from the TV set, since noise can be picked up.
4. The pre-out terminals are for connection to an amplifier-equipped sub-woofer or power amplifier. Do not use for purposes other than these, since oscillation and other problems can occur.

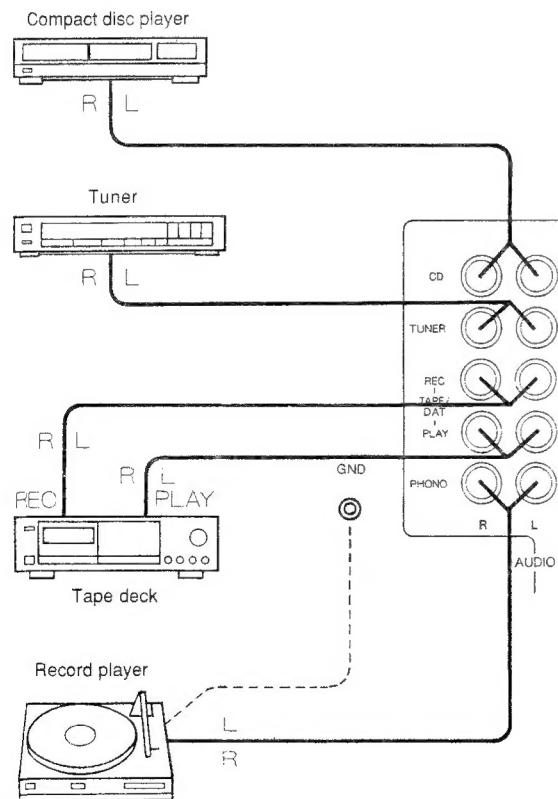
Protector Circuit

The protector circuit functions to cut off the sound in the event that the speaker cables are shorted or a malfunction occurs in the amplifier. If this should occur, switch off the power and correct the cause of difficulty. Then switch the power on to return to normal operation.

Video Equipment Connections

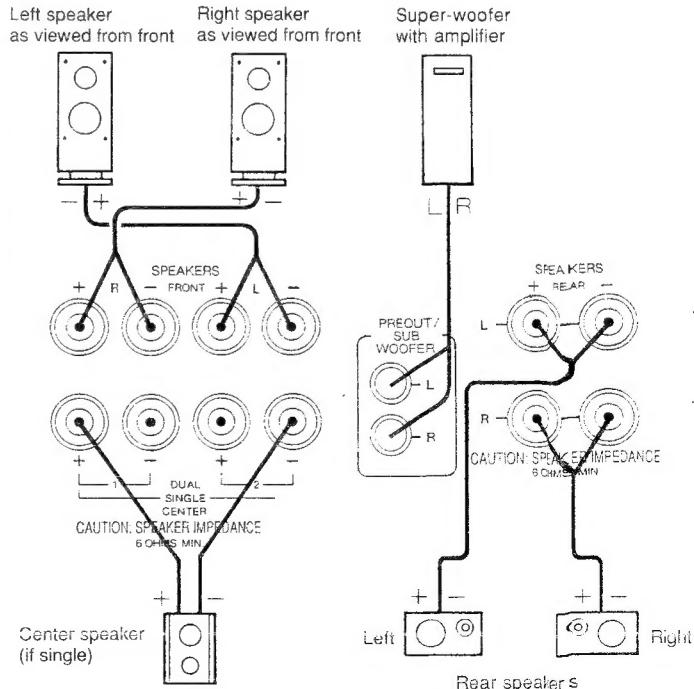


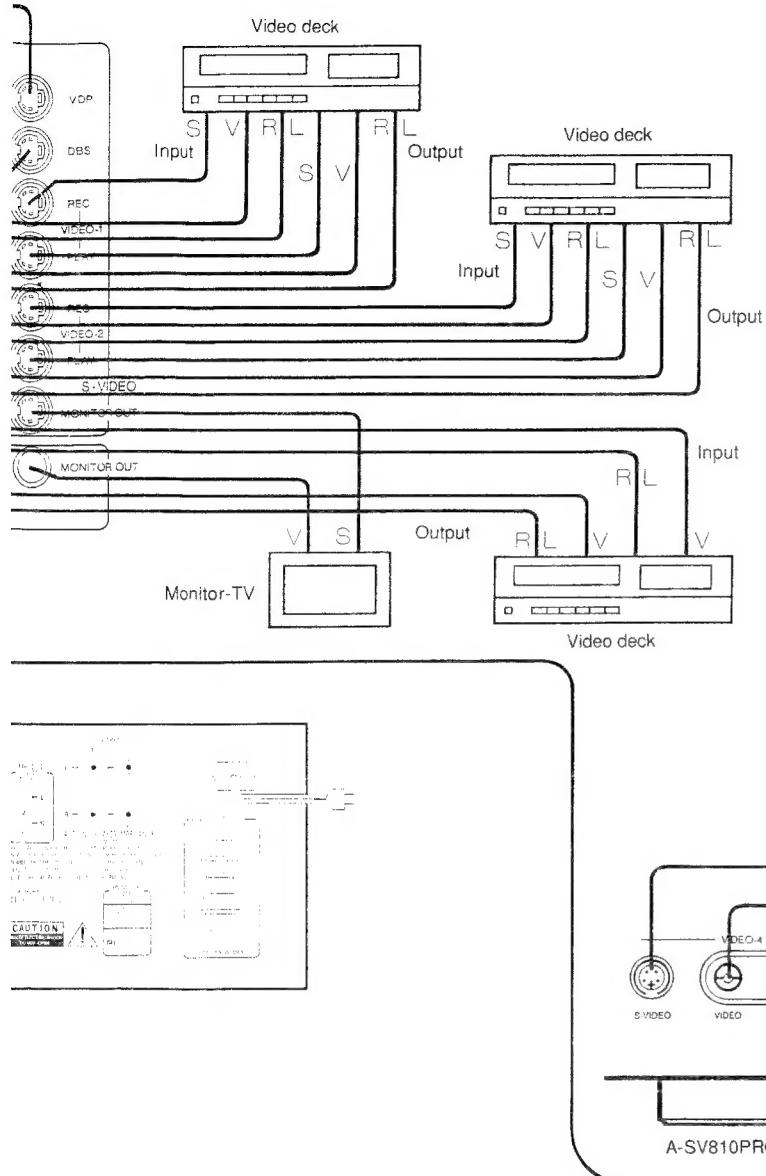
Audio Equipment Connections



1. Use a record player with an MM cartridge. Connect this to the phono jacks.
2. Some record players are less noisy if the ground lead is not connected.

Speaker Connections





If the video deck possesses an S connector, it is not absolutely necessary to also connect the normal (V) connector.

Video Disc Player

Connect the video disc player outputs to the VDP inputs.

Video Deck Connection

Connect the video deck playback outputs to the play jacks of this unit. Connect the recording inputs of the video deck to the REC jacks of this unit.

1. (VIDEO 1 - 3)

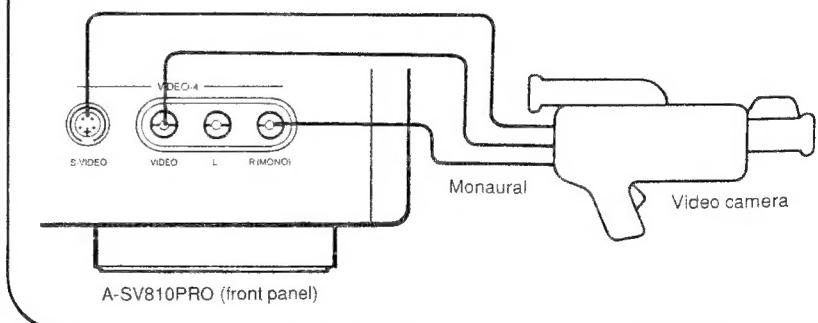
If the video camera, etc. uses a single input/output connection, change the connection to this unit to REC or play according to the function. Switch power off before changing the connection.

Up to 4 video decks can be connected to this unit. However, VIDEO-3 does not have an S connector.

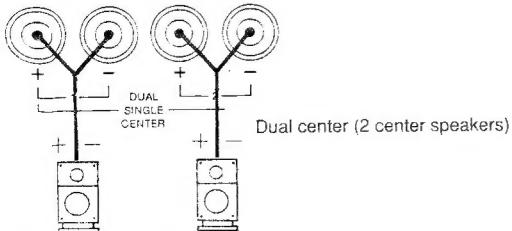
2. VIDEO-4 connection (front panel)

If the sound from the video camera is monaural, connect it only to the R (right) channel. This will produce 2-channel sound without necessitating actual hook up of the L (left) channel.

Video-4 is playback only. It cannot be used for recording sound or picture.



1. Connect speakers with a rated impedance of 6 ohms or greater to the speaker terminals. Also, avoid connecting a single speaker to two sets of terminals, as indicated in the figure, since this may cause damage.
2. When connecting the speaker cables, observe carefully that bare wire strands do not contact adjacent terminals or the rear panel.
3. If a single center speaker is used, connect as indicated in the left figure. Sound will not be obtained using other methods of connection or configuration.

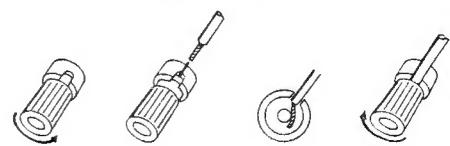


Speaker Cable Connection

1. Strip the insulation off the end and twist the strands to prevent fraying.



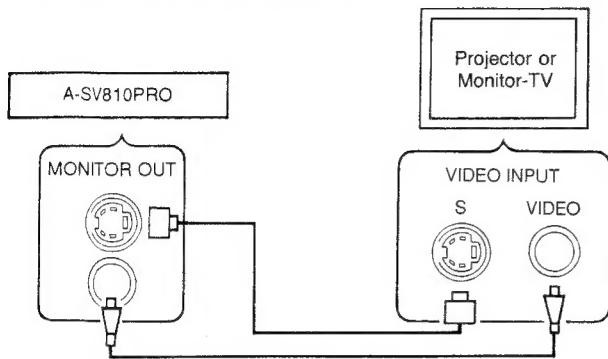
2. Unscrew the terminal knob and insert the twisted end of the cable into the hole. Securely tighten the terminal knob.
3. Insert the conductor fully into the hole and tighten the knob. Lightly tug on the cable to confirm secure connection.



- * If using a banana plug, tighten the terminal knob before connecting.

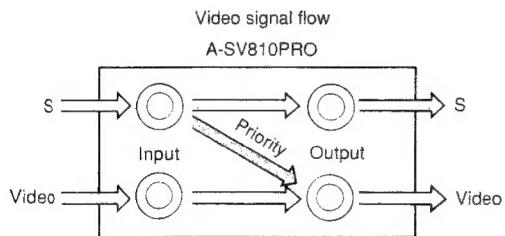
Projector and Monitor-TV Connections

1. Connect monitor out to the video input of the projector or monitor-TV. If the normal video connection is used, the on-screen functions can be enjoyed continuously.
2. If the S connection is used, the on-screen function can be operated only with the video source connected to the S connector and the audio source.



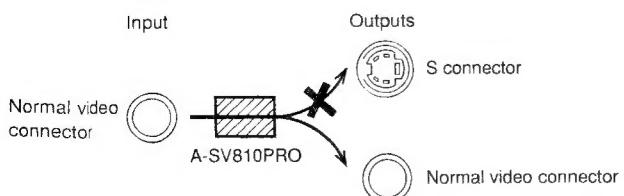
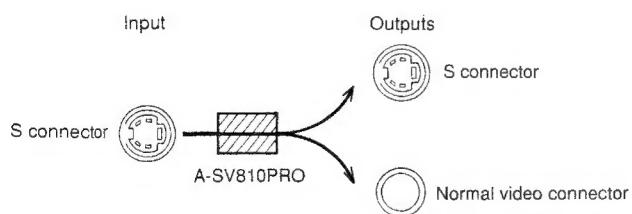
Video Input/Output

This unit has S input and S output connectors. A signal input into connector S will be output in both the S connector and the normal video connector. However, a signal input into the normal video connector will be output in only the normal video connector.



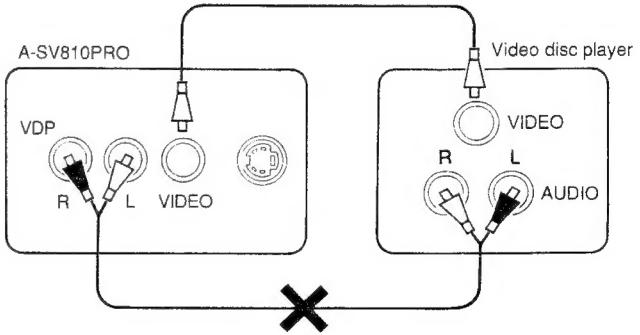
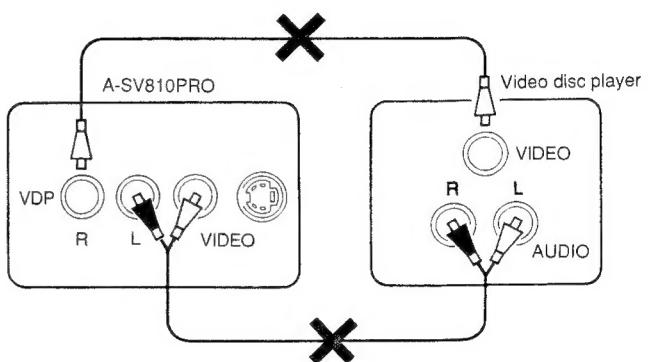
Monitor-TV

The picture from a video deck connected by means of the S connector can be viewed using either the S connector or the normal video connector. However, if the video deck is connected by means of a normal video connector, the picture can be viewed only via the normal video connector. Output is REC out or monitor out.



Cautions

1. Be sure to connect video leads to video jacks, and audio leads to audio jacks. Incorrect connection will not only affect performance, but can cause damage.
2. Use care to connect left and right audio channels correctly. If improperly configured, surround playback will not be possible.
3. When a video deck or monitor-TV with an S input is connected to both the S connector and the normal video connector, some models automatically select recording or playback via the S connection (S connector input priority).
4. When desiring to record or playback via the normal video connections, disconnect the S connections.
5. For details, refer to the instructions for the connected video equipment.



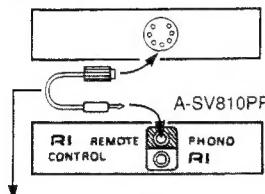
Connections for Remote Control (REMOTE CONTROL)

Note

Of the Onkyo tuners, turntables, cassette decks, CD players, etc. that can be remote controlled, some models have the **RI** mark and some do not. (**RI** : Remote interactive)

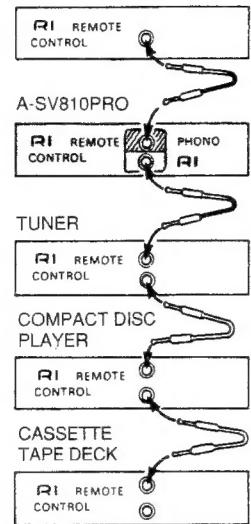
A tuner, cassette tape deck, compact disc player and turntable that have the Onkyo **RI** mark can be operated, using the accessory remote control transmitter.

TURNTABLE with no **RI** mark



To obtain this special cable (1/8" pin to 7-pin plug cable; part No. 2010140), Contact an Onkyo service center.

TURNTABLE with the **RI** mark



An **RI** remote control cable equipped with a 1/8" (3.5 mm) diameter and a miniature two-conductor phone plug is attached to the A-SV810PRO and to any turntable, tuner, or compact disc player with the **RI** mark.

Insert the accessory **RI** remote control cable plug attached to the Onkyo turntable with the **RI** mark into the phono of the A-SV810PRO's remote control. To use an Onkyo compact disc player and cassette tape deck and tuner with the **RI** mark, insert the accessory remote control cable plug into the remote control jacks. As far as connecting sequence is concerned, it doesn't matter whether the cable is connected from the A-SV810PRO to tuner or to the cassette tape deck or to the compact disc player. The connecting sequence is fixed only for the turntable. The remote control transmitter is operated by aiming it towards the remote control sensor of the A-SV810PRO.

1. Onkyo turntables that can be remote controlled but do not have the **RI** mark. This equipment has a 7-pin DIN jack on the rear panel. Connect this jack and the jack on the rear of the A-SV810PRO with the special cable for this purpose, which is sold separately.
2. Onkyo CD players that do not have the **RI** mark can not be remote controlled from the A-SV810PRO. To remote control with the A-SV810PRO, the codes can be learned by the RC-189M to control through the CD player's remote control transmitter. Control by aiming at the CD remote control sensor.

Note

Remote control operation is not possible when only the remote control cable is connected. Remote control cable and audio cable must be connected.

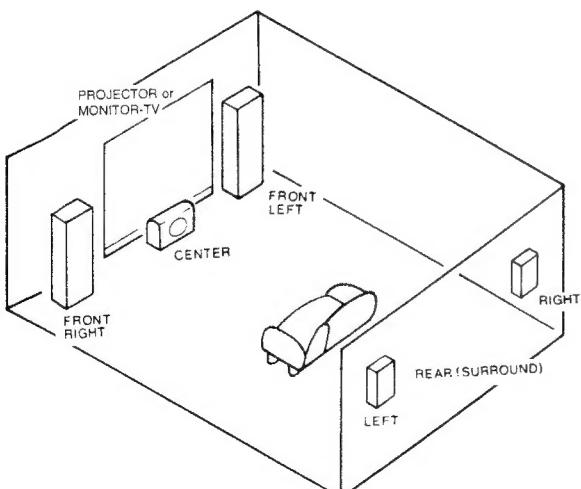
Speaker Setting

Basic Setting

The figure shows an example of the basic setting to enable use of the surround effect.

1. Front Speakers

If the left and right front speakers are placed too far apart, the resulting sound separation in the surround mode bypass will cause a "weak center" sound effect.

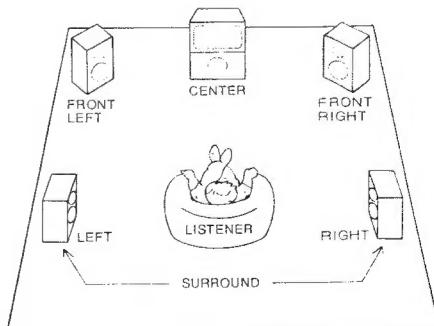


2. Center Speaker

In movie theaters, the center speaker is placed in back of the screen. This increases realism since the performers' voices seem to emanate from the screen. The Dolby Pro Logic Surround is essentially the same as this type of commercial surround system. The best effect is obtained when using a center speaker. This also provides a stable surround effect when there are multiple listeners or when listeners are located in relatively poor listening positions to the left or right of center.

The center speaker can also be used in other surround modes, thereby avoiding the "weak center" sound effect.

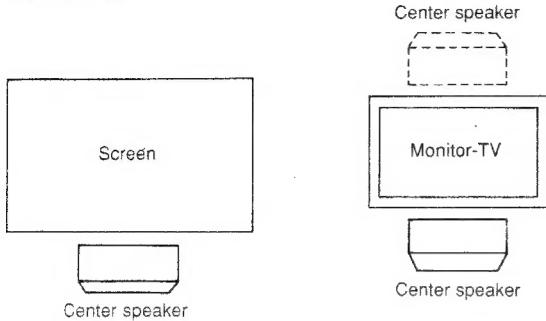
Examples of Speaker Placement



Center Speaker Setting

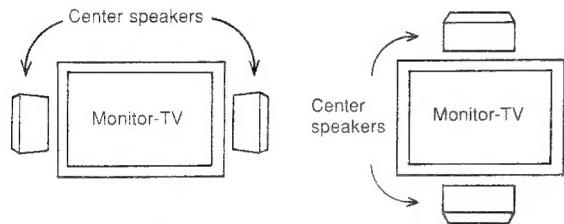
1. Single Center Speaker

When using a screen, set the center speaker below the screen. For a monitor-TV, set the speaker either above or below it.



2. Dual Center Speakers

Position the speakers either to the left and right, or above and below, of the monitor-TV.

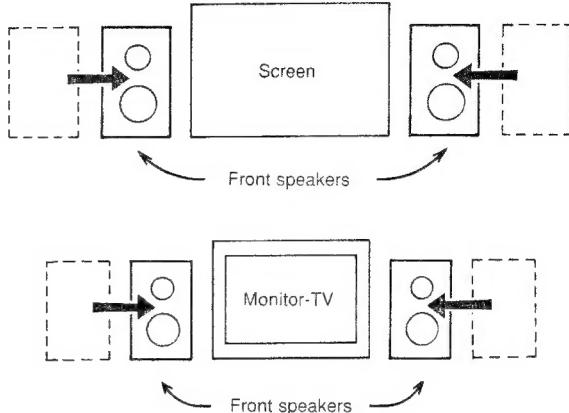


3. For Better Effect

Position the center speaker as close as possible to the picture. However, anti-magnetic speakers are preferred since typical speakers can interfere with the monitor-TV color display. Aim the center speaker slightly inwards.

Without a Center Speaker

The matching of sound and picture may seem unnatural if the front speakers are placed too far apart from the screen. They should be placed as close as possible to the picture. However, if they are too close to the monitor-TV, color shading can occur. In this case, either set the speakers outside the range where shading is induced or use anti-magnetic speakers.

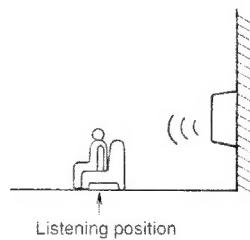


Note

Some interference may occur even with anti-magnetic speakers with certain monitor-TV combinations. In such cases, place the speakers slightly away from the monitor-TV.

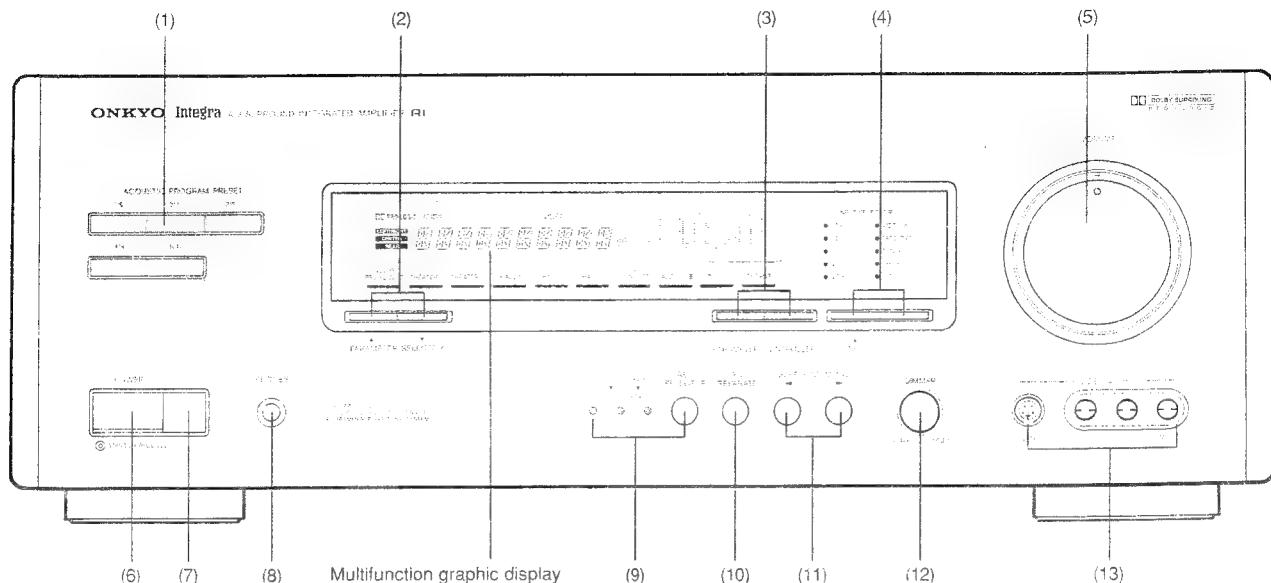
Rear Speaker Setting

The rear speakers serve to convey sound movement and are thus not placed on the floor. It is suggested that they be positioned at a height slightly above the listeners' ears. Some users elect to point the speakers toward the ceiling or a wall and listen to the reflected sound.



Section Names and Functions (Front Panel)

1. The **R** mark indicates that the function can be operated by remote control.
2. Except in the case of timer-activated recording (page 20), be sure to press only one button at a time. Pressing two or more buttons simultaneously can lead to a malfunction.



- (1) **Acoustic Program Preset (ACOUSTIC PROGRAM PRESET) **R****
The acoustic program can be called by pressing any button on the front panel or by using the remote control transmitter. In standby mode or recording standby mode, pressing one of these buttons switches power on and activates preset. Pressing any button once calls each button's primary function (nos. 1 - 5), pressing the button twice calls the button's secondary function (nos. 6 - 10). The same procedure is followed when using the remote control transmitter. For example, pressing button 1/6 once calls it to 1, pressing it twice calls it to 6.
- (2) **Parameter Selector (PARAMETER SELECTOR Δ/∇)**
Set the parameters (room size, tone controls, etc.) according to the present listening environment. Press the ∇ button for advance; the Δ button for return. The parameters are indicated in the display. These can be changed with the parameter controller.
- (3) **Parameter Controller (PARAMETER CONTROLLER $+-$)**
These buttons change the parameters selected by the parameter selector buttons.

- (4) **Input Selector (INPUT SELECTOR) **R****
These buttons select the inputs in forward or reverse sequence. (CD, Phono, Tuner, Tape/DAT, Video-4, Video-3, Video-2, Video-1, DBS, VDP, CD, etc.)
- (5) **Volume Control (VOLUME) **R****
Turn the knob clockwise to increase the volume and counter-clockwise to reduce it. The volume level is indicated in the display on the front panel and on the screen display of the monitor-TV. Some static or acoustic interference may be heard at very low volume levels. To eliminate the sound, use the muting button of the remote control transmitter.
- (6) **Power Switch (POWER) and Standby/Received Indicator **R****
Press to switch the power on. The standby/received indicator goes out. Press again to switch the power off. The standby/received indicator lights. The standby/received indicator also lights when a signal is received from the remote control transmitter.

In order to store the memory data and allow remote control transmitter operation, a small amount of current is supplied to the processor regardless of the power switch setting. This is termed the standby mode and its status is indicated by the standby/received indicator.

(7) **Remote Sensor**
Receives signals from the remote control transmitter. The standby/received indicator lights whenever a signal is received.

(8) **Phones Jack (PHONES)**
Connecting a headphone plug cuts off the sound from all speakers. Sound can be heard only from the headphones. The audio signal to the head phones comes the front L/R speaker channels.

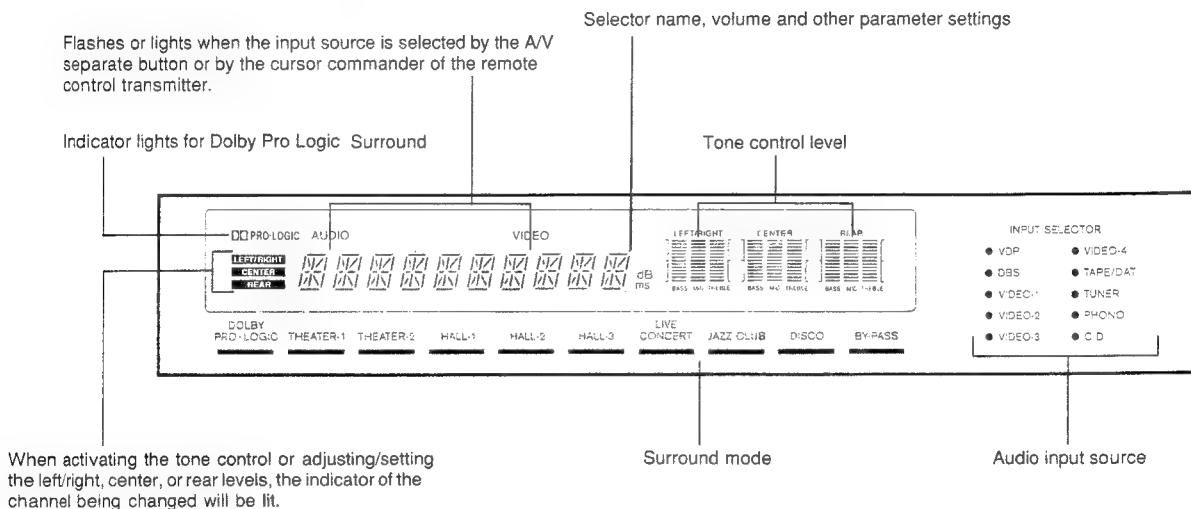
(9) **REC Selector (REC SELECTOR) and indicator R**
Selects the sound and picture source for recording. REC standby is activated by turning off the main power switch during that this button is being depressed.

(10) **A/V Separate (A/V SEPARATE)**
Selects the input source mode for video only, audio only or video and audio together.

(11) **Surround Mode (SURROUND MODE) R**
These buttons select the surround mode in forward or reverse sequence.
(Dolby Pro Logic, Theater-1, Theater-2, Hall-1, Hall-2, Hall-3, Live Concert, Jazz Club, Disco, Bypass, Dolby Pro Logic, etc.)

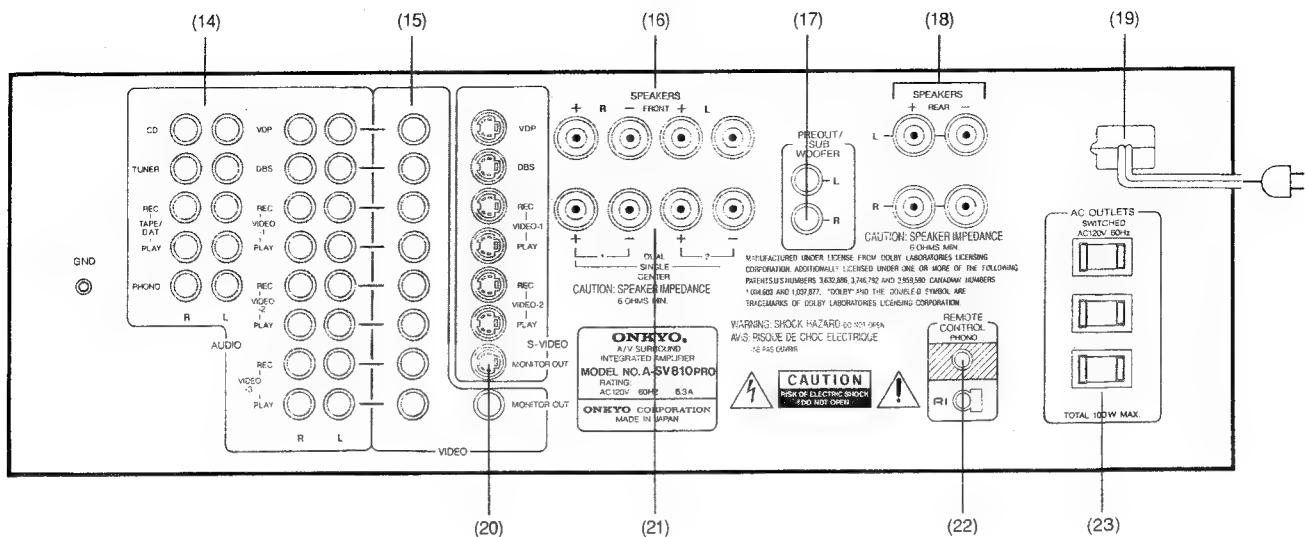
(12) **Dimmer Control (DIMMER)**
Adjusts the brightness of the display. Turn clockwise to increase brightness; counter-clockwise to dim.

(13) **Video-4 Inputs (Equipped with S Connector)**
Can be used to connect a video camera, auxiliary tape deck, etc. If monaural sound is desired, connect the audio cable to R (Mono), only.



Multifunction Graphic Display

Section Names and Functions (Rear Panel)



(14) Audio Equipment Connectors

CD connector:
 Connect a CD player.
 Tuner Connector:
 Connect a tuner.
 Tape/DAT connector:
 Connect a cassette deck or DAT.
 Phono jacks and GND (ground) connector:
 Connect a record player that uses an MM cartridge.
 Connect the ground lead to GND.

(15) Video Equipment Connectors

VDP connector:
 Connect a video disc player.
 DBS connector:
 Connect a broadcast satellite tuner or other types of tuners.
 Video-1 (with S connector):
 Connect a video deck.
 Video-2 (With S connector):
 Connect a video deck.
 Video-3:
 Connect a video deck.

(16) Front L/R Speaker Terminals

Terminals for connecting the front L/R speakers.

(17) Pre-out/Sub-woofer Jacks

Mixed front and center signal outputs. Level adjusted by the volume control (5). A super-woofer (with amplifier) can be connected.

(18) Rear Speaker Terminals

Terminals for connecting the rear speakers

(19) Power Cord Plug (Source)

Connect to AC 120V, 60Hz. (USA & Canadian models)
 See page 5 when you have a worldwide model.

(20) Monitor Out

Connect to a monitor-TV that has a normal video input or S connector.

(21) Center Speaker Terminals

Terminals for connecting the center speakers.

(22) Remote Control Jacks

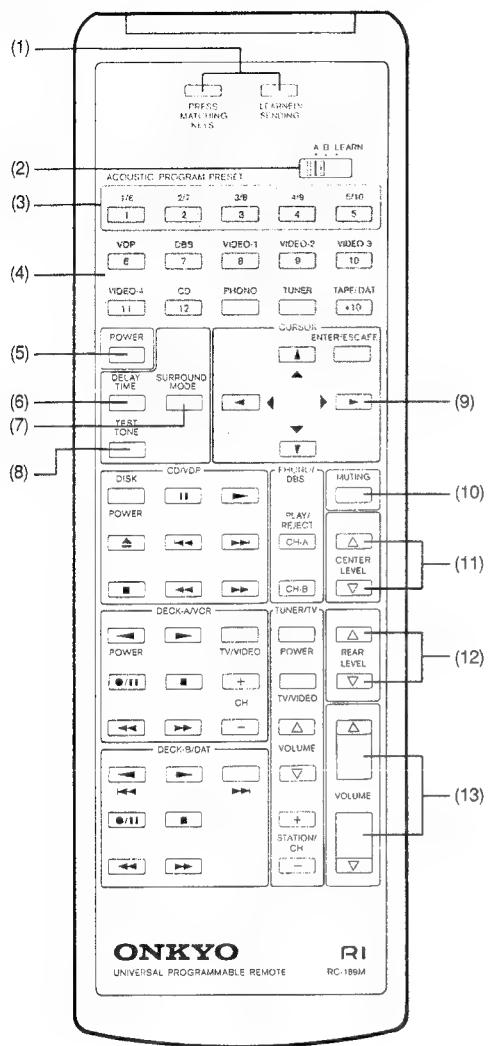
Connect remote control cables. (See page 9.)

(23) Switched AC Outlets

Convenience outlets for plugging in other equipment. Power is switched on and off with the front panel power switch. Up to 3 units with a combined power consumption of less than 100 watts may be connected. Do not use for large-size TV sets or heavy appliances.

Section Names and Functions (Remote Control Transmitter)

Remote Control Transmitter (RC-190M)



The following buttons are used to control the A-SV810PRO.

(1) Operation Indicators

The two indicators function as guides when codes are stored in the remote control transmitter. If the encoding process is incomplete or the battery depleted, both indicators will flash whenever a button is pressed.

(2) A/B/Learn Switch

A: Set to this position during operation for (3) - (13) buttons and other white characters.

B: Set to this position during operation for (3) - (13) buttons and Onkyo DAT deck with the RI mark or when intending to use buttons with an encoded function.

LEARN: Use this position to input the code of another remote control transmitter.

* Regardless of the user's choice of A or B position, the operating codes for buttons (3) - (13) are encoded in the memory.

(3) Acoustic Program Preset

Operation is the same as that of the mainframe.

(4) Input Selector

Select the desired input source.

(5) Power Button (POWER)

Operation is the same as that of the mainframe.

(6) Delay Time (DELAY TIME)

When the surround mode is set for Dolby Pro Logic, use this button to select the delay time.

(7) Surround Mode (SURROUND MODE)

Surround mode selector button. Operation is the same as that of the surround mode ▶ button of the mainframe.

(8) Test Tone (TEST TONE)

Test tone on/off.

(9) Cursor (▲ / ▼ / ◀ / ▶) and Enter/Escape (ENTER/ESCAPE) Buttons (Cursor Commander)

Control menu display and cursor movement within the display.

(10) Muting Button (MUTING)

Press to activate muting and cut off the sound. Press again to deactivate the muting and return to original volume level. Switching off power to the unit also deactivates the muting.

(11) Center Level (CENTER LEVEL ▲/▼)

Adjust the center speaker volume.

▲: Increases the volume

▼: Decreases the volume

(12) Rear Level (REAR LEVEL ▲/▼)

Adjust the rear speaker volume.

▲: Increases the volume

▼: Decreases the volume

(13) Volume Control (VOLUME ▲/▼)

Adjust volume level

▲: Increases the volume

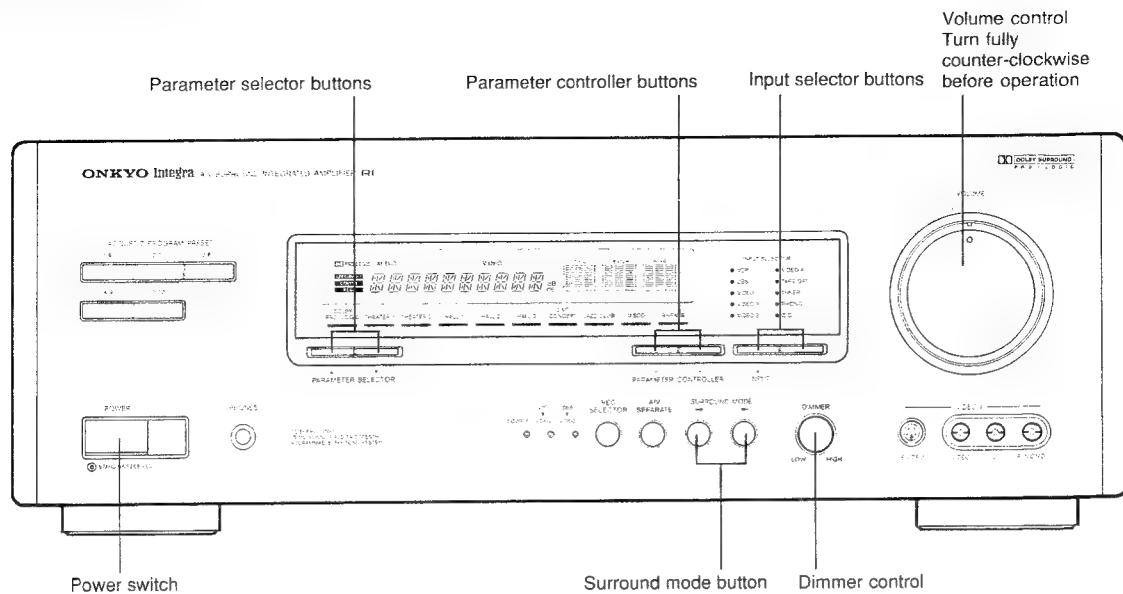
▼: Decreases the volume

* Set the A/B/LEARN switch to B to use the stored remote control codes.

* All buttons except (11), (12) are capable of being encoded.

* Refer to remote control operation on page 36.

Play Operation



Audio Source Playback (CD, TUNER, TAPE, PHONO)

1. Turn on the power of this unit and the equipment to be played.
2. Select the desired source with the input selector of the mainframe or the remote control transmitter.
3. Select the desired surround mode using the surround mode button.
4. Play the audio equipment.
5. Adjust the volume control for a comfortable listening level.
 - A. During surround playback, adjust the rear speaker volume with the parameters or rear level buttons of the remote control transmitter.
 - B. Adjust the center speaker volume with the parameters or center level buttons of the remote control transmitter.

Note

In this case, a picture is not transmitted from the monitor output. If a picture is desired, refer to separate video and audio playback on page 17.

Visual Source Playback (VDP, DBS, Video 1 - 4)

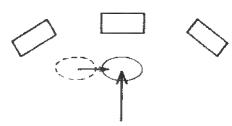
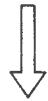
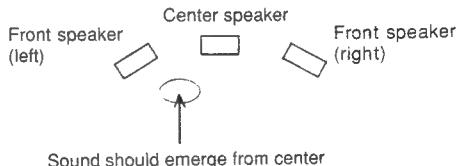
1. Turn on the power of this unit and the equipment to be played.
2. Set the video projector or monitor-TV input to allow video playback via this unit.
3. Select the desired source with the input selector of the mainframe or remote control transmitter.
4. Select the desired surround mode using the surround mode button.
5. Play the visual source. The picture is displayed on the monitor-TV and the sound can be heard from the speakers.
6. Adjust the volume control for a comfortable listening level.
 - A. During surround playback, adjust the rear speaker volume with the parameters or rear level buttons of the remote control transmitter.
 - B. Adjust the center speaker volume with the parameters or center level buttons of the remote control transmitter.

- * To adjust the display brightness, use the dimmer control.
- * Operating the parameter selector changes the display as indicated in the table on the next page. The parameters can then be changed. Set these as desired.

Input Balance

This model contains an automatic input balance circuit and requires no adjustment. The auto input balance is in operation during Dolby Pro Logic, Theater-1 and Theater-2 surround modes.

The auto-input balance operates continuously to automatically adjust left and right balance to optimize decoder performance.

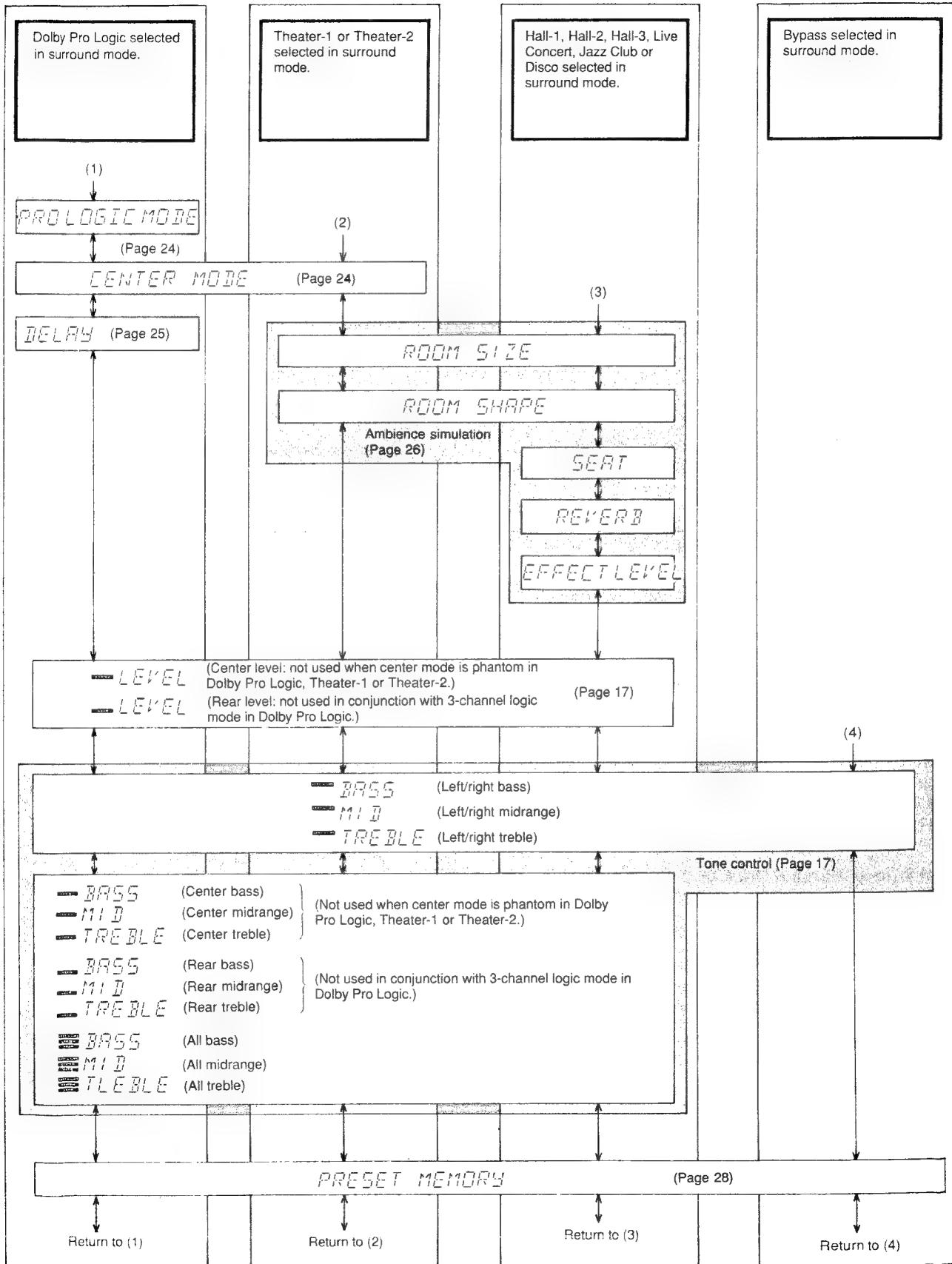


Auto input balance circuit automatically adjusts

Parameters

This table indicates the display changes when the parameter selector buttons are pressed. Press the Δ button to select an upper item and the ∇ button to select a lower item. For

each item, use the parameter controller buttons to change the value or effect. Refer to the descriptions provided in the table for each adjustment.

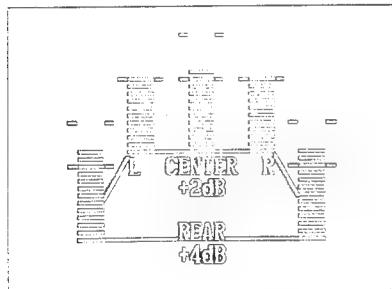


Rear and Center Level Adjustment

These levels can be adjusted in modes other than bypass in the surround mode. Set the parameter selector for center level or rear level indication and adjust the level with the parameter controller.

The levels can also be adjusted by using the center level and rear level buttons of the remote control transmitter. If a monitor-TV is connected, the level can be checked from the on screen picture. (Make sure the cursor commander screen is off if the cursor commander is to be used.)

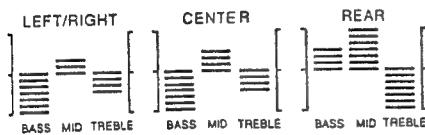
1. The center level cannot be adjusted when the center mode is set for phantom and the surround mode set for Dolby Pro Logic, Theater-1 or Theater-2.
2. The rear level cannot be adjusted if the Dolby Pro Logic Surround mode is set to 3-channel logic.



Tone Control Adjustment

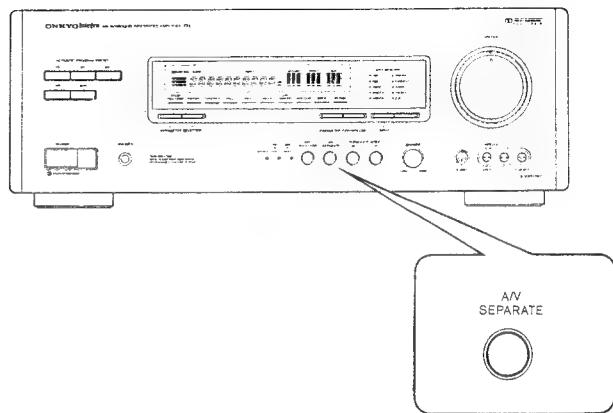
Bass, midrange and treble can be adjusted for the front (left and right), center and rear. Select the parameter to be adjusted with the parameter selector, then adjust using the parameter controller. Each value can be set in 2 steps from +12 to -12. The value can be checked in the display. To adjust all the channels at once, set the display to light the left/right, center and rear simultaneously.

Best results for Pro Logic occur when all 3 front speakers sound the same in mid and high frequency ranges.



Separate Video and Audio Playback (A/V Separate Button)

Separate video and audio sources can be played by using the A/V separate button (background video - BGV).



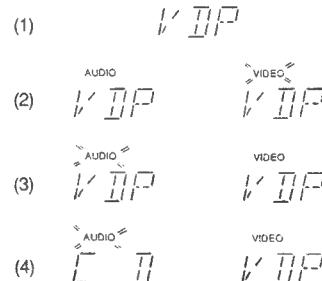
1. Press the A/V separate button.
2. Either the audio or the video indicator in the display will flash.
3. Use the input selector buttons to select the audio source when "audio" is flashing, and the video source when "video" is flashing.

Example

During VDP playback, pressing the A/V separate button initiates the display sequence indicated in the illustration.

(1) - (2) - (3) - (1)...

1. During display (3), select the audio input using the input selector buttons. When CD player is selected as the audio input, it will be indicated as in display (4). The audio indicator continues to flash briefly, then stops.
2. Pressing the input selector buttons at position (4) releases the A/V separate mode.



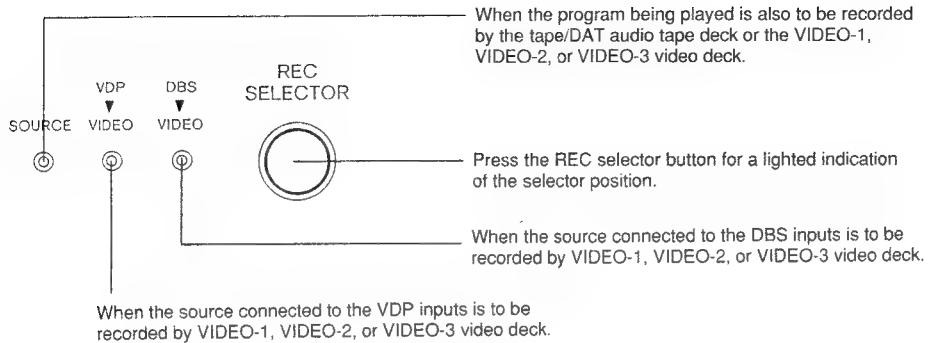
TV Reception in the Surround Mode

Use the tuner of the video deck to receive the broadcast. By routing the signals through this unit, surround effects and on-screen functions can be enjoyed.

Video/Audio Recording and Dubbing

REC Selector

At the VDP ▶ VIDEO and DBS ▶ VIDEO positions, video and audio can be recorded regardless of the source being played back.



Notes

- The tone control and surround effects cannot be inserted into the recorded sound.
- Adjust the recording levels with the controls of the audio or video tape deck.
- Set the REC selector to off when not dubbing or recording sound. Cutting off this unnecessary circuit optimizes sound quality.

An audio tape deck can also be connected to VIDEO-1, VIDEO-2, or VIDEO-3 for audio recording or dubbing (of course, in this case no video will be recorded).

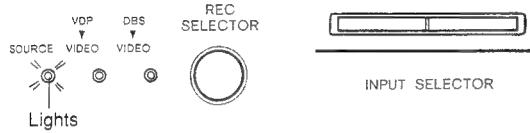
Video Recording

Notes

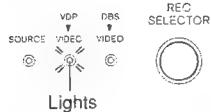
- Do not change the REC selector setting while recording is in progress.
- Certain combinations of video input and output connections will allow sound recording, but not picture recording. An input via the normal video connector cannot be recorded via the S connector. Especially if the program to be recorded is important, take a few moments to double check the video connections. (See page 8)

■ Recording a Playback Source with a Video Deck

1. Set the REC selector button to the position where the source indicator lights.
2. Set the source to be recorded with the input selector buttons.
3. Prepare the video deck and begin recording.
4. Prepare the source and begin playback.

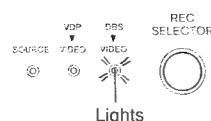


- * During recording, avoid changing the input source with the input selector or on-screen settings.
- * This model includes a background video (BGV) function. The desired video and audio combination can be recorded by using the A/V separate button (page 17) or by the on-screen operation (page 31). Select the video and audio sources in step 2 above.
- * The audio signal being played is also transmitted to the Tape REC connectors and can thus be recorded with an appropriately connected tape deck.
- * If the REC selector is set to source and the input selector to Video-1, the audio signal is not obtained from the Video-1 REC connectors. This applies to all other video connectors as well.



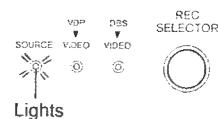
■ Record from VDP to a Video Deck

1. Set the REC selector to light the VDP ► VIDEO indicator.
2. Prepare the video deck and begin recording.
3. Prepare the equipment connected to the VDP and begin playback.



■ Record from DBS to a Video Deck

1. Set the REC selector to light the DBS ► VIDEO indicator.
2. Prepare the video deck and begin recording.
3. Prepare the equipment connected to the DBS and begin playback.



Audio Recording

Avoid operating the REC selector while recording is in progress.

■ Recording a Source in Playback with an Audio or Video Tape Deck

1. Set the REC selector to light the SOURCE indicator.
2. Set the input selector to the source to be recorded.
3. Prepare the audio or video deck and begin recording.
4. Prepare the source equipment and begin playback.

Avoid changing the input source with the input selector or on-screen settings while recording is in progress.

Example

Recording from CD to tape

1. Set the REC selector to light the SOURCE indicator.
2. Set the input selector to CD.
3. Prepare the tape and begin recording.
4. Prepare the CD player and begin play.

Note

When the REC selector is set to source and the input selector to TAPE/DAT, the recording signal is not obtained from the TAPE/DAT connectors. Similarly, if VIDEO-1 is selected, the recording signal is not obtained from the VIDEO-1 connectors. This is also the same for the other video connectors. To monitor the recording signal, use the facilities of the tape deck.

■ Tape Dubbing

1. Tape dubbing refers to using two tape decks and while one is playing a previously recorded tape, the other copies the program onto a second tape.
2. As this model does not include a tape dubbing function, connect the second tape deck to unused sound outputs such as those for video. This will enable dubbing.
3. Refer to the above section on "Recording a Source in Playback with an Audio or Video Tape Deck" for recording operation.

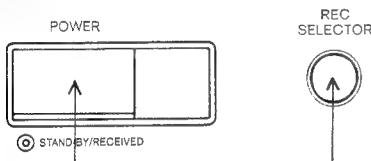
Timer Setting (Timer REC, Timer Play)

This model includes a 24 hour (approx.) REC standby mode for video and audio recording only. On previous amplifiers, timer recording from a tuner to a video deck was not possible after power had been switched off. However, the REC standby mode of this model continues to supply power to the video/audio selector circuit even after the main power switch has been turned off, thus rendering timer recording possible.

Timer Recording (REC Standby Mode)

Operation from the mainframe is described below. For operation using the cursor commander of the remote control transmitter, refer to page 31.

1. Refer to pages 18 and 19. Set the mainframe for the desired recording mode.
2. While depressing the REC selector button, push the power switch.



3. Mainframe power is switched off, "REC stand-by" appears in the display, and the REC selector indicator flashes.
 - * The REC stand-by indicator will go out after a few seconds.
 - * To release the REC stand-by mode, press the power switch or acoustic program preset button. This deactivates the REC stand-by mode and switches on the mainframe power.
 - * Also read the instruction manuals of the connected equipment.

Notes

- After about 24 hours, the REC standby mode is deactivated automatically and all power is cutoff.
- During the REC standby mode, sound is not obtained regardless of the volume control setting. Use care not to inadvertently leave the volume control set too high in this mode, because the volume will no longer be muted the next time the mainframe is powered up.
- Power to the AC convenience outlets provided at the back of the mainframe is not cutoff during REC standby. The internal amplifier circuit also functions and the temperature of the unit rises as it does normally when power is on.

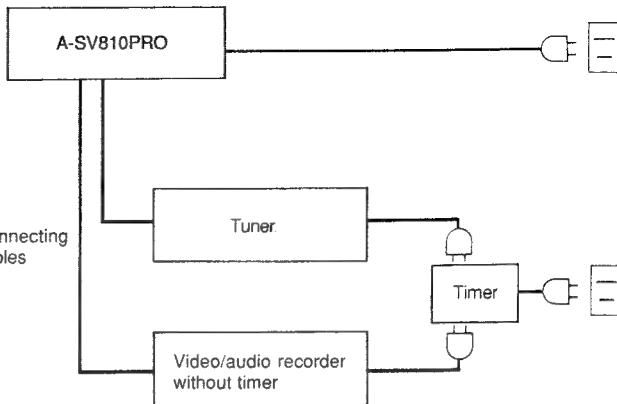
Note

When using the REC STANDBY MODE, do not connect the main unit power cord to the timer. Instead, connect it directly to the AC socket on the wall.

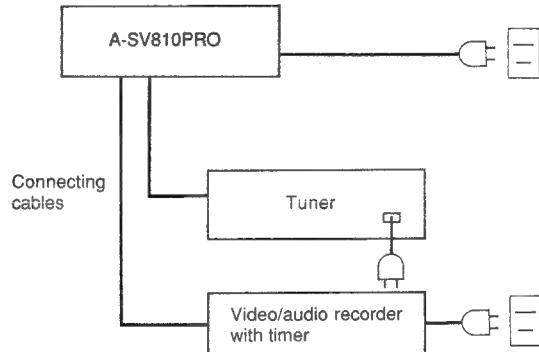
If the power to the main unit is cut because of power failure or timer during REC STANDBY MODE, recording will not be possible.

Connection Examples

Set to REC standby mode



Set to REC standby mode

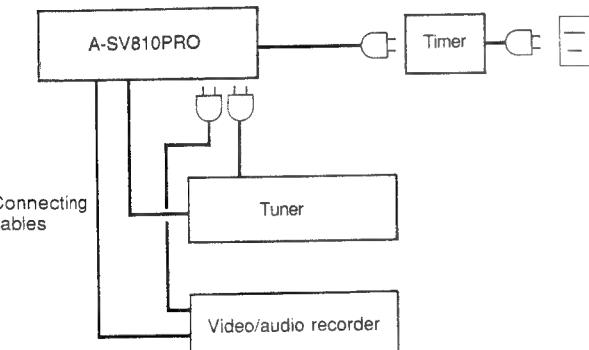
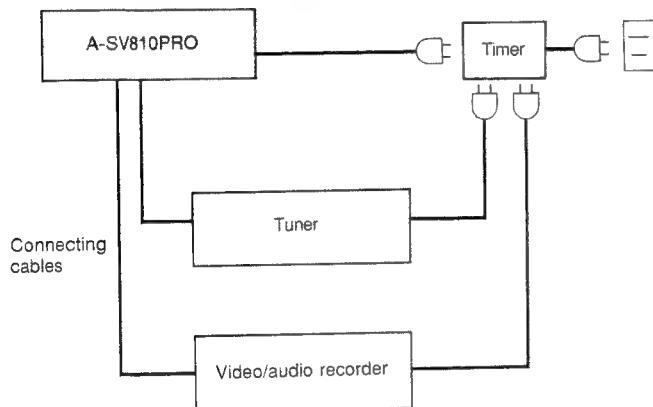


Plug this Unit into the Timer Unit for Timed Recording

1. Refer to pages 18 and 19. Set the mainframe for the desired recording mode.
Turn the volume control counter-clockwise to the lowest position.
2. Prepare the source equipment and recorder. These may be plugged into either the AC convenience outlets or the timer.
3. With the power switch of this unit in the on setting, set the timer.
4. When the timer switches the power on, power will be supplied to this unit.

* If using 2 or more timers or the internal timers of the connected equipment, set the timers so the power is supplied last to audio and video equipment.

Connection Examples



Timer Play (Wake-up Function)

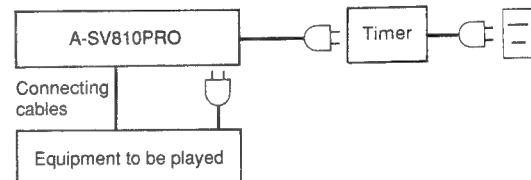
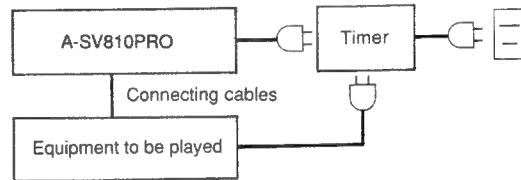
1. Set this unit for playback (page 15).
2. Prepare the equipment to be played.
3. Set the timer.
4. When the timer switches power on, power will be supplied to this unit.

* Refer to the operating instructions for the connected equipment.

Notes

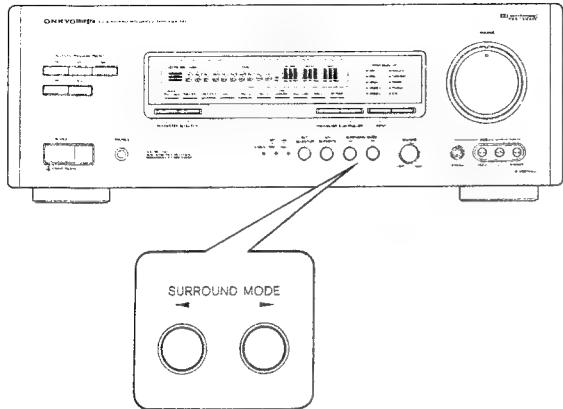
- If the muting function (enabled only from the remote control transmitter) is engaged when the timer is connected, the function continues even after power is resupplied from the timer. To obtain sound in timer play, confirm that the muting function is released before setting the timer.
- These functions cannot be used with equipment in which microprocessor memory is erased when AC power is interrupted.

Connection Examples



Surround Modes

This model is equipped with nine different surround modes, which are selected using the surround mode buttons. Select the modes according to the type of program being played and the desired ambience, such as that of a movie theater, a concert hall, etc.



1. Dolby Pro Logic

This mode is appropriate for playing program material that was encoded with Dolby Surround. The same thrill felt when viewing a program in a movie theater can be enjoyed when this mode is selected. See pages 23-25.

2. Theater-1, Theater-2

Actual movie theaters use many rear speakers. These modes are designed to replicate this atmosphere. They are suitable for playing program material that was recorded using Dolby Surround. Theater-1 simulates a small theater, while Theater-2 provides the aura of a larger theater.

3. Hall-1, 2 and 3

These are suitable for classical and other types of music characterized by its many sound reverberations. There are three different hall sizes to choose from, the smallest: Hall-1; intermediate: Hall-2, and the largest: Hall-3.

4. Live Concert

This provides a more open sound on a larger scale than Jazz Club mode. It is suitable for performances that were recorded live.

5. Jazz Club

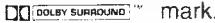
This is suitable for such music as pops and jazz, which are characterized by limited sound reverberations.

6. Disco

Use this for rhythmical listening to pops, jazz, etc.

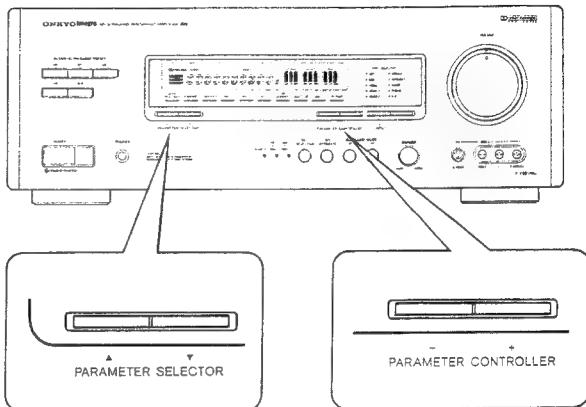
7. Bypass

The surround mode is not used. Audio input signals (left and right) are conveyed directly to the front speakers without sound modification.

- * During Theater-1 and 2, refer to page 24 for center mode and test tone adjustments.
- * The center mode cannot be switched in modes other than Dolby Pro Logic and Theater-1 and 2. In the initial setting, the center level is set to the off position. To obtain sound from the center speaker, increase the center level accordingly.
- * Commercial video sources recorded with the Dolby Surround system are indicated by the  mark.

Surround Tuning

1. Select the desired mode with the surround mode buttons, then press parameter selector (refer to "Display Changes" on page 16.)
2. After the display changes, the parameter controller buttons may be used.
 - * Refer to pages 25 and 26 regarding surround parameters. Adjust these as desired.
 - * These parameters can also be adjusted by using the on-screen function. Refer to page 32.



Dolby Pro Logic Surround

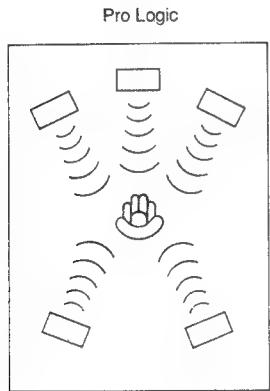
This model includes a built-in Dolby Pro Logic Surround decoder. Dolby Pro Logic Surround was developed as a consumer version of the Dolby Stereo system used in movie theaters. It is suitable for playing sources recorded with the Dolby Surround system. Its features are as follows.

1. Spacious Sound Movement Effect

The Dolby Pro Logic Surround decoder includes a directional enhancement circuit. Separation is excellent among front, rear, left and right sounds, thus providing good sound localization.

2. Speech Emanates from the Performer

The Dolby Pro Logic Surround decoder includes a center channel. Sound at the center position is thus effectively inserted into the picture. The sound positioning is superb even when heard from locations to the left or right of the main listening position. The directional enhancement circuit provides a realistic sensation of location and direction.



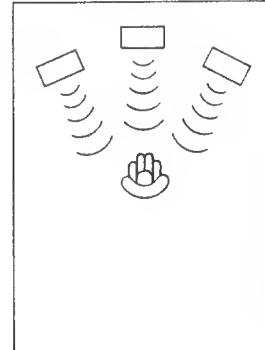
Dolby 3-Channel Logic

Where rear speakers are not available, 3-channel logic provides partial reproduction of the Dolby Pro Logic Surround capabilities using only the 3 front channels (left, right and center). For only the 3 front channels, the directional enhancement circuit allows the shifting sound feature of Dolby Pro Logic Surround to be enjoyed.

The surround signal is reproduced by the front left and right speakers.

Use of the rear speaker system is recommended for full enjoyment of Dolby Pro Logic Surround.

3-Channel Logic



Dolby Pro Logic Surround Adjustments

Refer to the "Surround Tuning" section on page 22 or 32 for adjustments.

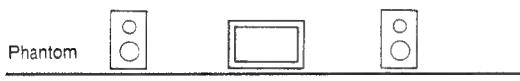
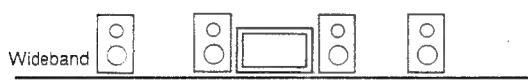
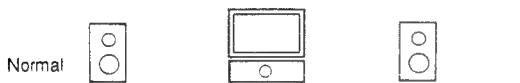
Pro Logic Modes

1. **Pro Logic**
Set to this mode for normal Pro Logic playback.
2. **3-Channel Logic**
When not using rear speakers, set to this mode.

Center Modes

Dolby Pro Logic Surround requires a center speaker for reproducing the center signal. The mode should be selected based on the type of center speaker used. See the settings provided on page 10.

1. **Normal**
The center speaker is smaller or otherwise less able than the front speakers to handle bass frequencies. The center signal is divided so that sounds above 100 Hz are reproduced by the center speaker and those below are applied to the front speakers.
2. **Wideband**
In this case, the bass response of the center speaker system is essentially equal to that of the front speakers. The center channel sound is completely applied to the center speaker.
3. **Phantom**
Select this mode if a center speaker is not used. The center channel sound is applied to the front speakers.



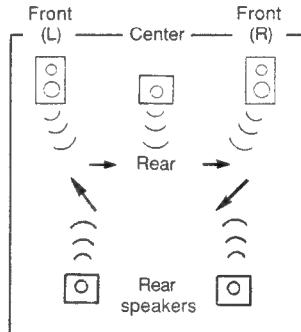
Test Tone

The best effect is obtained from the Dolby Pro Logic Surround when the volume is balanced among the speakers. Use the test tone to adjust the front, rear and center speaker balance as follows.

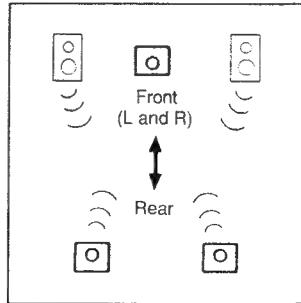
1. **Check the Volume Control Setting**
Set it to a low position in order to avoid a sudden occurrence of high volume when beginning operations with the test tone.
2. **Set Test Tone to the On Position**
Using the remote control transmitter, press the test tone button or use the cursor commander to select surround tuning from the menu.
3. When the remote control test tone button is pressed, the tone emanates from the speakers in the sequence front left - center - front right - rear.... From the listening position, use the remote control center and rear level buttons to adjust for equal test tone volume on all channels.
 - A. In the phantom center mode, the test tone alternates between the front (left and right) and rear channels.
 - B. Left and right balance cannot be adjusted.
4. **Turn the Test Tone Off**
Again press the test tone button or use the appropriate command(s) from the menu display. This completes the adjustment.

* The test tone continues for 1.5 seconds on each channel for a total speaker system check time of 90 seconds.

* If using the cursor commander, see "Surround Tuning" on page 32.



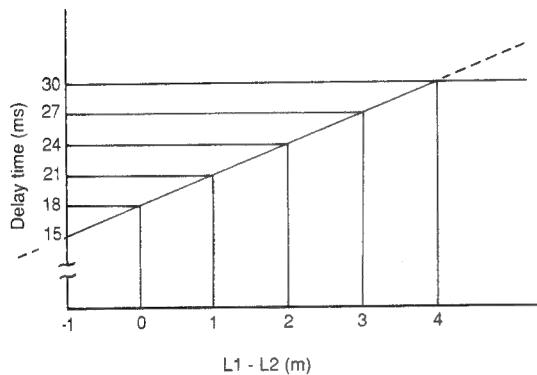
Test tone sequence in normal and wideband modes



Test tone sequence in phantom mode

Delay Time

- With certain programs, sounds that should be heard from the rear emerge from the center, or vice versa. In such cases, the delay time can be adjusted for the correct sound positioning. The standard setting is 21ms, but if correction is needed, select from among 15, 18, 21, 24, 27 and 30ms. However, to optimise the surround effect, determine the setting from the relationship indicated in the figure.
- The cursor commander can also be used for setting the delay time while listening to the sound. See "Surround Tuning" on page 32.



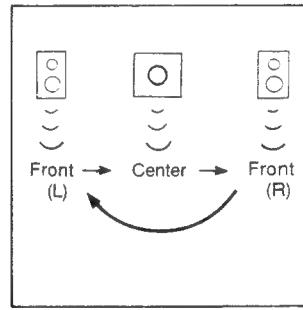
Dolby 3-Channel Logic Adjustment

Use this mode to enjoy programs containing the Dolby Surround mark without using the rear speakers.

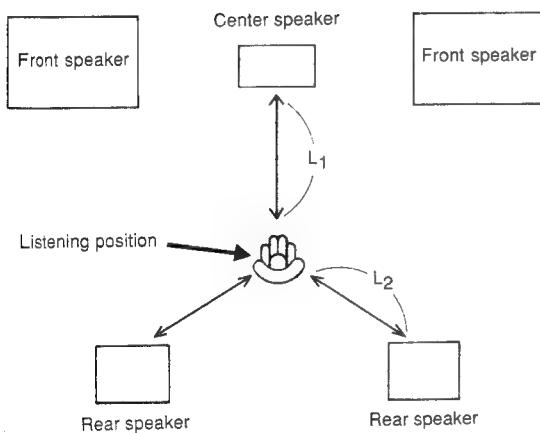
- Set the surround mode to Dolby Pro Logic.
- Use the mainframe parameter selector (page 22) or the cursor commander (page 32) to set the Pro Logic mode.
- Set the Pro Logic mode for 3-channel logic.
- Set the center mode for normal or wideband.

* Use the test tone in the same manner as explained on page 24. However, since rear speakers are absent, the tone is obtained only from the left, center and right front speakers.

* The delay time cannot be set during 3-channel logic.



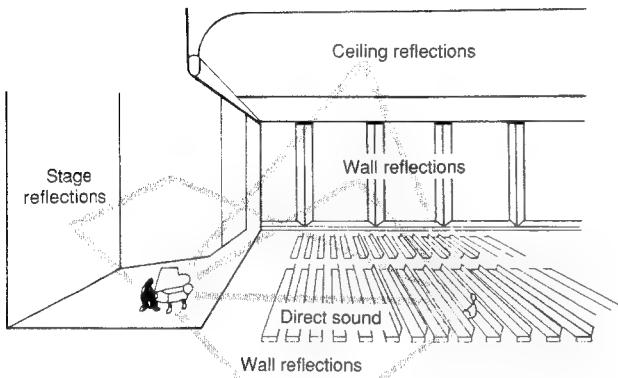
Test tone sequence in auto



DSP (Digital Signal Processor)

Ambience Simulation

The sound heard at a live performance differs according to the listening hall, due to the sound reflections and reverberations. While these are important parts of the performance, they are not included in very many recordings. Ambience simulation adds these effects to recordings from which they are absent to provide an impression nearer that received when actually attending a live performance.



DSP (Digital Signal Processor)

The DSP converts the musical signal into digital form and produces reflected sound from the digital signal. This is applied to the musical signal to yield an effect approaching that of a live performance.

Note

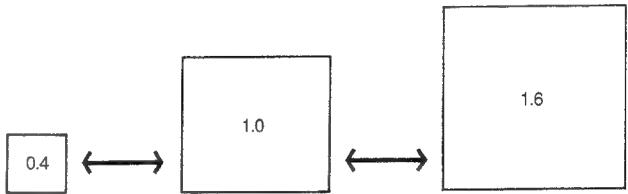
The concert hall effect is produced from the reflections and reverberations contained in the original recording. These are converted into reflected sound that is reproduced from four directions. Thus, in some cases an unnatural impression can be conveyed if there are too few reflections and reverberations in the recording or if the effects in the original recording were produced artificially.

Ambience Simulation Adjustment

The following parameters can be adjusted during ambience simulation. Refer to the "Surround Tuning" on page 22. They can also be adjusted using the cursor commander of the remote control transmitter. See page 31. After initializing, adjust the effect level. Listen to the left and right front speakers and select the level suitable to the program. Also check for natural sound from the rear speakers. Adjust room size, room shape, seat and reverb according to taste.

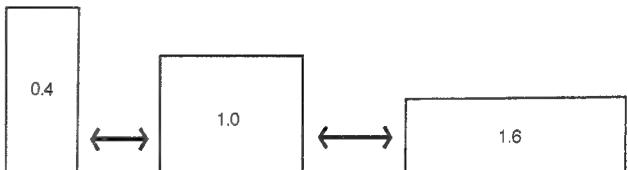
1. Room Size

This simulates the size of the auditorium. There are seven steps between 0.4 to 1.6 from which to select. The initial setting is 1.0 (0.2 step). The room size increases in proportion to the selection of a larger value. Room size can be set when the surround mode is set to Theater-1 or 2, Hall-1, 2 or 3, Live Concert, Jazz Club or Disco.

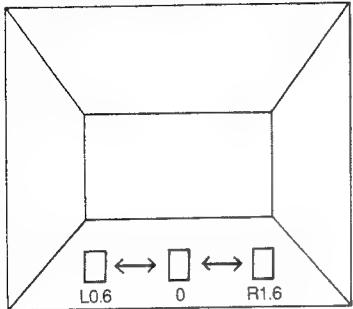


2. Room Shape

This simulates the shape of the auditorium. There are seven steps between 0.4 to 1.6 from which to select. The initial setting is 1.0 (0.2 step). The room width increases in proportion to the selection of a larger value. Room shape can be set when the surround mode is set to Theater-1 or 2, Hall-1, 2 or 3, Live Concert, Jazz Club or Disco.



3. **Seat**
This simulates the left and right seating positions in an auditorium. Selection is in 7 steps from L0.6 to R0.6. The initial setting is 0 (0.2 step). Center is 0, while larger numbers correspond to positions left or right of center.
Seat can be set when the surround mode is set to Hall-1, 2 or 3, Live Concert, Jazz Club or Disco.



4. **Reverb**
Settings can be selected at any of 7 steps between 0.4 to 1.6. The initial setting is 1.0 (0.2 step). Reverberation increases as the selected number grows larger.
This can be set when the surround mode is set to Hall-1, 2 or 3, Live Concert, Jazz Club or Disco.

5. **Effect Level**
This can be set in 7 steps from -6 dB to 6 dB. The initial setting is 0 (2 step). The effect is diminished as selected values decrease.
This can be set when the surround mode is set to Hall-1, 2 or 3, Live Concert, Jazz Club or Disco.

Note

The DSP simulates the size, shape and seating position of the performance. It does not adjust for the size, shape and seating position of the listening room. Adjust according to the type of music and the listener's personal taste.

Theater-1 and 2 Modes

Only the room size and shape can be adjusted in the Theater-1 and 2 modes. Center mode and test tone adjustments can be made in modes other than ambience simulation. Refer to page 24.

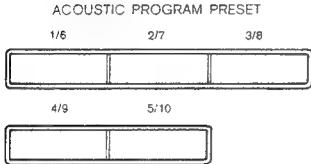
Acoustic Program Preset

Acoustic Program Preset Application

The modes indicated in the table are stored in the memory. Pressing the corresponding preset button immediately sets up the desired modes. However, the input source and volume setting are not stored in the memory and must be selected by the user.

1. Press the preset button once to select nos. 1 - 5. Press it twice in succession to select nos. 6 - 10.
2. If power is off, after the preset button is pressed, the power comes on and the selected mode is initiated.

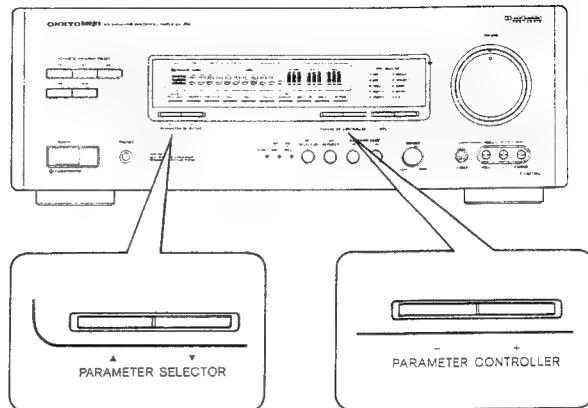
Afterwards, operation is the same as normal.



Preset No.	Surround Mode	Center Mode
1	Dolby Pro Logic	Normal
2	Dolby Pro Logic	Phantom
3	Dolby 3-channel Logic	Normal
4	Hall-1	Off
5	Bypass	—
6	Theater-1	Normal
7	Theater-2	Normal
8	Live Concert	Off
9	Jazz Club	Off
10	Disco	Off

How to Preset Memory

The desired performing modes can be entered into the preset button memory. (10 patterns can be stored.) The input source and volume setting can also be stored at this time. To use the on-screen function when setting the memory, refer to page 33.

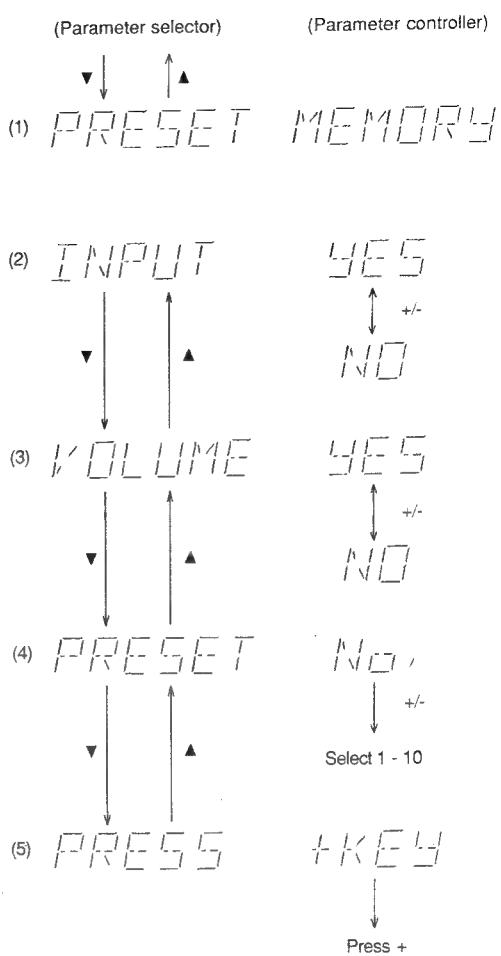


1. Press the **▲** or **▼** parameter selector button. "preset memory" appears in the display.
2. The input source presetting step is produced. Select yes or no with the parameter controller. If yes, the present source is stored.
3. Press the **▼** parameter selector button for the volume presetting step. Select yes or no with the parameter controller. If yes, the present volume setting is stored.
4. Again press the **▼** parameter selector button for the preset no. display. Select the number to be preset with the parameter controller.
5. Wait about 7 seconds or press the **▼** parameter selector button for the "press + key" display.
6. Press the "parameter controller + button" to complete presetting. To stop presetting, either press the parameter selector button or wait about 7 seconds.

* In above steps 2 - 6, if more than about 7 seconds elapse before the next operation, memory setting is released and input selector is indicated. To resume memory setting, repeat from step 1.

Notes

- To initialize the preset memory, i.e., return to original its settings, use the cursor commander of the remote control transmitter. This cannot be done from the mainframe. (See page 33)
- There may be a slight difference in the volume when the setting is recalled from memory.
- The memory settings remain stored even when the power switch is off (standby mode). However, if the power cord is disconnected, the memory contents will be lost after about 2 weeks. If the memory is erased, repeat the programing steps.
- In the surround mode, the previous surround tuning settings are recalled. For example, if Hall-1 has been tuned to preference, then afterwards the acoustic program preset buttons are used to recall different Hall-1 settings, the previously tuned settings will be lost. Therefore, when the desired surround mode tuning has been determined, it is recommended that the user immediately enter that information into the preset memory.



On-screen Display (OSD) Functions

On-Screen Display Functions

There are two types of monitor-TV on-screen displays, which are as follows.

1. The cursor commander produced by pressing the enter/escape button of the remote control transmitter.
2. The message display which appears when changing such functions as input selector, surround mode, and center and rear levels. The message display goes out automatically after a few seconds.

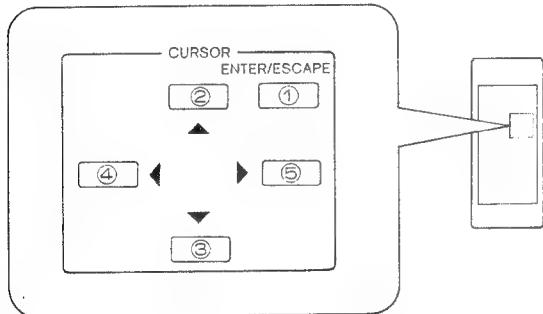
* The on-screen signal is transmitted only from the monitor out connections. It can not be obtained from the REC connections.

* The menu display can be operated only by the cursor commander of the remote control transmitter.

Basic Operation (Refer to the Figure)

1. Press the enter/escape button (1) to display the main menu.
2. Select the desired sub-menu with cursor buttons (2) and (3), then press enter/escape to display that sub-menu.
3. Select the items with cursor buttons (2) and (3), then change the values or settings with cursor buttons (4) and (5). In the tone control setting, buttons (2) & (3) and (4) & (5) function oppositely.
4. Press the enter/escape button (1) to return to the main menu. The cursor is located at the menu off position.
5. Again press enter/escape to extinguish the menu.

* Repeat above steps 2 - 4 to use other functions.



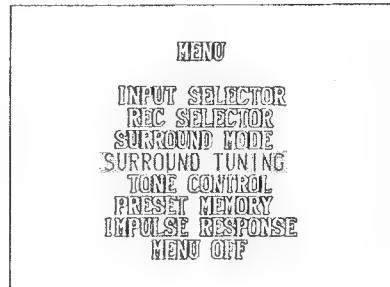
Cursor Commander Buttons

(1) Selects on-screen display and menu items.
(2) and (3)
Shift the cursor vertically within the on-screen display.
(4) and (5)
Shift the cursor horizontally within the on-screen display.
They are also used to change item values and modes.

On-screen Menu Operation

Press the enter/escape button to display to the main menu shown in the figure. Use the cursor \blacktriangle or \blacktriangledown buttons to shift the cursor vertically. These buttons can also be held down to continue an action. When the cursor is positioned at an item from input selector to impulse response, pressing the enter/escape button yields that sub-menu.

Items that do not pertain to particular surround modes appear in black and cannot be selected.



Input Selector

When the cursor is at input selector of the main menu, pressing the enter/escape button produces the sub-menu indicated in the figure. The cursor is shifted vertically by pressing the ▲ or ▼ button.

When the cursor is at both video and audio, picture and sound are selected simultaneously with reference to the audio source.

1. Video

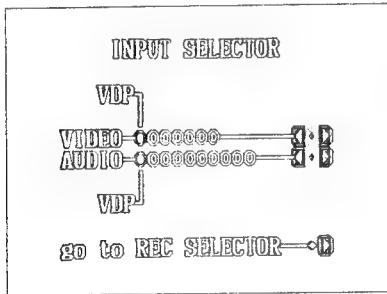
The video inputs are displayed. Use the ▲ or ▼ button to select the video source.

2. Audio

The audio inputs are displayed. Use the ▲ or ▼ button to select the audio source. Picture and sound are selected simultaneously with the input selector of the mainframe or remote control transmitter.

3. Go to REC Selector

Press ▶ to go directly to the REC selector sub-menu without returning to the main menu.



REC Selector

Press enter/escape while the main menu cursor is at REC selector to shift to the sub-menu indicated in the figure.

Use the ▲ or ▼ button to change the setting.

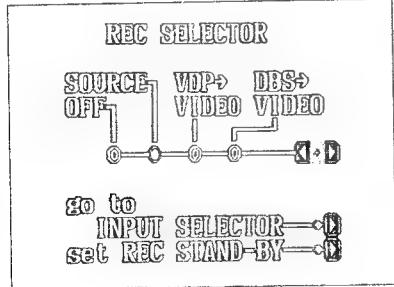
1. Go to Input Selector

Press the ▶ button to return to the previous page (input selector).

2. Set REC Standby

Press the ▶ button to set the mainframe to the REC standby mode.

* Refer to REC selector and REC standby on pages 18 - 20.



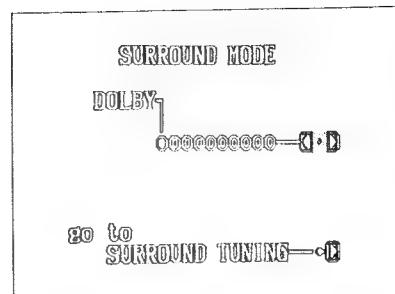
Surround Mode

On the main menu, set the cursor to surround mode and press the enter/escape button to produce the sub-menu indicated in the figure.

Use the ▲ or ▼ button to change the setting.

1. Go to Surround Tuning

Press the ▶ button to shift to surround tuning.



Surround Tuning

On the main menu, set the cursor to surround tuning and press the enter/escape button to produce the sub-menu indicated in the figure. Each parameter can then be adjusted.

The example indicated in the figure is Dolby Pro Logic. Use the **▲** or **▼** button to both shift the cursor vertically and scroll the display.

The **◀** or **▶** button changes the value. Press **▶** to increase the value and **◀** to decrease it.

These items are not selectable in the bypass surround mode.

1. Go to Preset Memory

Press the **▶** button to shift to preset memory.

2. Initialize

Press the **▶** button to set each parameter to initial value.

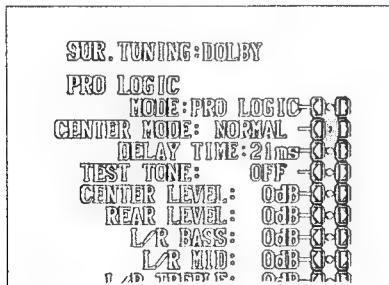
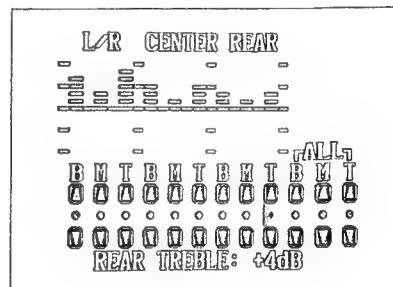
3. The test tone items are also indicated in the Dolby Pro Logic, Theater-1, and Theater-2 surround modes. Pressing the **◀** or **▶** button shifts the test tone in the sequence indicated in the figure.



- At left, right, center and S (rear), the tone is produced continuously on each channel.
- At auto, the tone is produced automatically in the sequence front left - center - front right - rear. The test tone continues for 1.5 seconds on each channel for a total speaker system check time of 90 seconds.
- "Pulse" provides an indication for delay time adjustment in the Dolby Pro Logic Surround mode. Noise is produced simultaneously and intermittently from the center and surround channels. The delay time is adjusted so that the center and surround channel sounds can be heard separately. It is suggested to set the delay to where the sounds just start to be heard separately.

Tone Control

- On the main menu, set the cursor to tone control and press the enter/escape button to produce the adjustment sub-menu indicated in the figure.
- The **◀** or **▶** button shifts the cursor left or right. The **▲** or **▼** button changes the value in 2 steps from +12 to -12. B is bass, M, midrange and T treble. At the all position, all channels are simultaneously adjusted.
- In the Dolby Pro Logic Surround mode, the surround effect increases to the degree tone differences among the channels decrease. Therefore, after adjusting the front left and right, center and rear channels individually, the all function can also be used to adjust them simultaneously.



Preset Memory

On the main menu, set the cursor to preset memory and press the enter/escape button to produce the sub-menu indicated in the figure.

The ▲ or ▼ button shifts the cursor vertically.

1. Preset No.

Press the ▲ or ▼ button to select the number from 1 to 10 to be preset.

2. Input Memory

Press the ▲ or ▼ button, then select yes or no. If yes, the input source is stored in the memory.

3. Volume Memory

Press the ▲ or ▼ button, then select yes or no. If yes, the volume setting is stored in the memory.

4. Memory

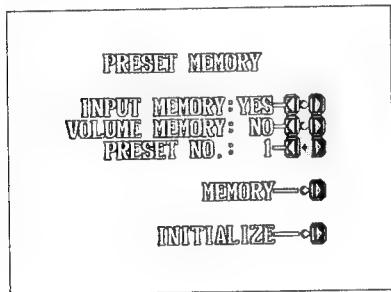
Press the ▶ button to store the surround tuning data (page 32), plus input and volume settings for the selected preset no. in the memory.

The preset no. indication flashes twice, then goes out indicating completion of the memory entry process.

The test tone mode is not stored in the memory.

5. Initialize

Press the ▶ button to return the selected preset no. memory to original (factory) settings.

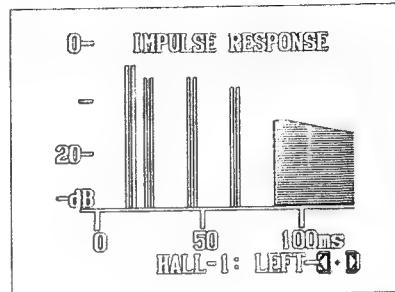


Impulse Response

On the main menu, set the cursor to impulse response and press the enter/escape button to produce the sub-menu indicated in the figure.

During ambience simulation, the reflection pattern and reverberations are indicated. Press the ▲ or ▼ button to change the displayed channel.

The indication will change if room size, shape, etc. are varied. Delay is more audible as the indicator expands toward the right.



Menu Off

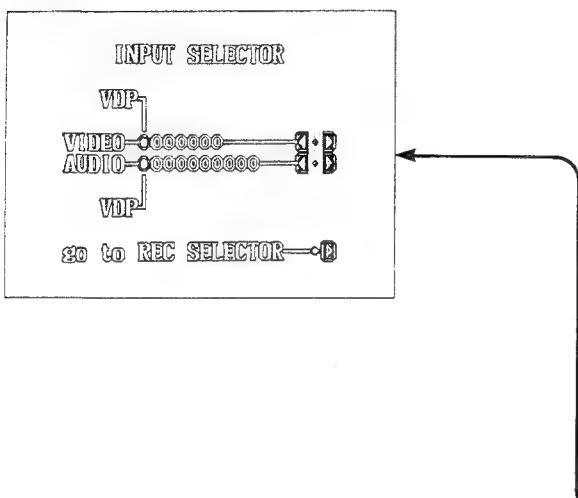
The cursor always shifts to this item when returning from a sub-menu to the main menu. On this item, press the enter/escape button to extinguish the cursor commander indicator.

Screen Change Chart

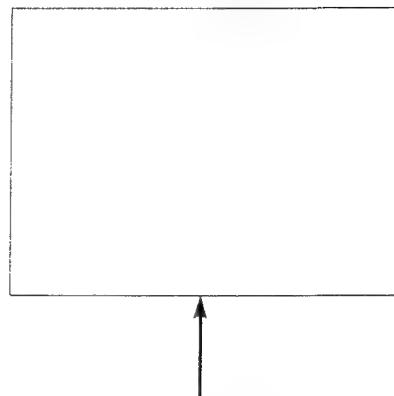
1. indicates screen change when pressing the enter/escape button.
2. indicates screen change when pressing the **◀** or **▶** button.

Input Selector Screen

Input Selector

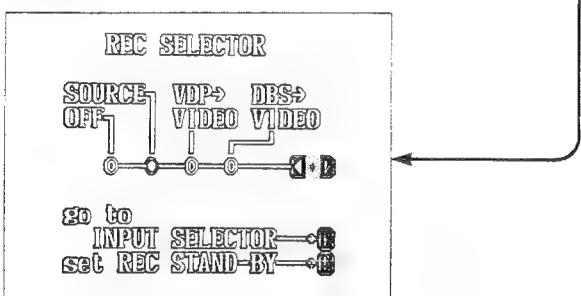


On-screen Off Mode

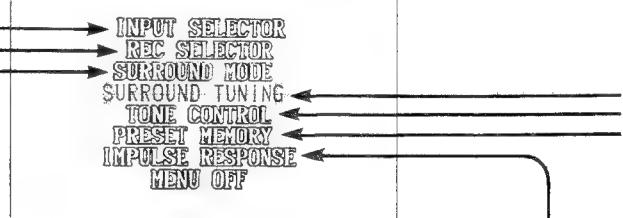


REC Selector Screen

REC Selector Screen



MENU

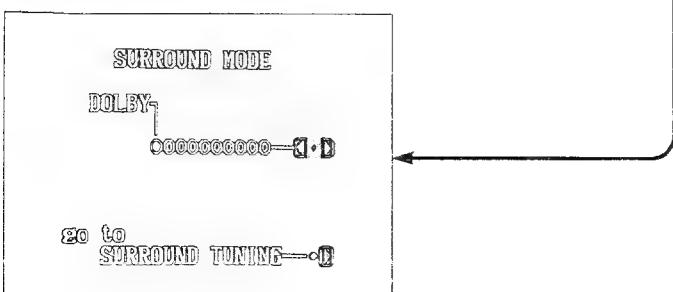


Menu Screen

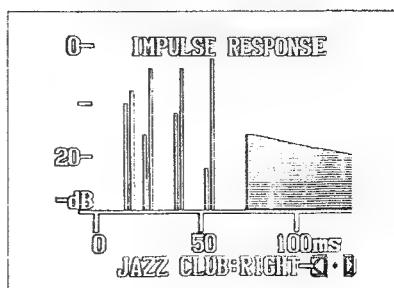
Main screen

Surround Mode Screen

Surround mode screen

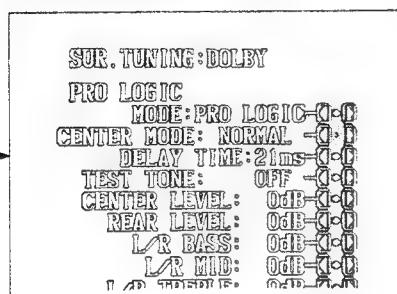


Impulse Response Screen



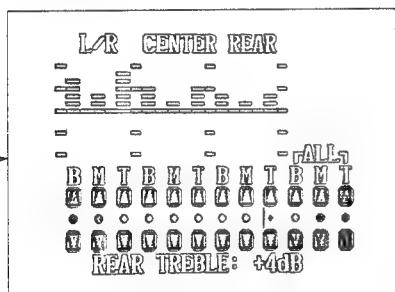
Surround Tuning Screen

Sub-menu for adjusting surround parameters. The screen has a scroll function. The next screens appear when the room size, room shape and seat are selected.

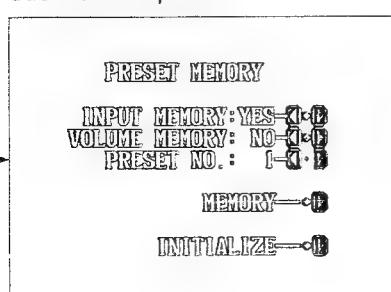


Tone Control Screen

Tone Control Screen
Sub-menu for tone control operation.

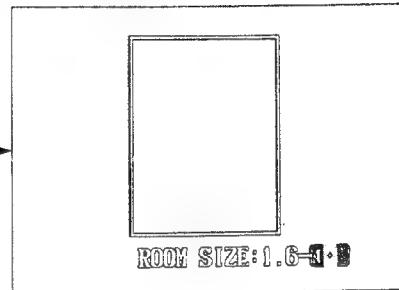


Preset Memory Screen



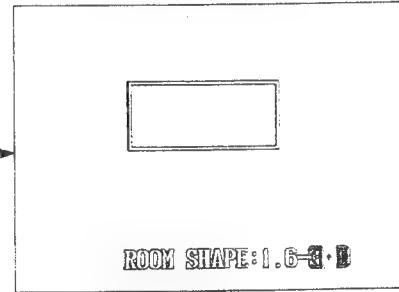
Room Size Screen

Adjusts the apparent size of the performance site.



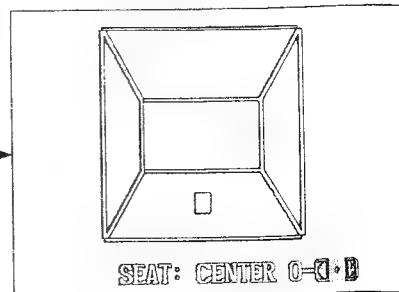
Room Shape Screen

Adjusts the apparent shape (length and width) of the performance site.



Seat Screen

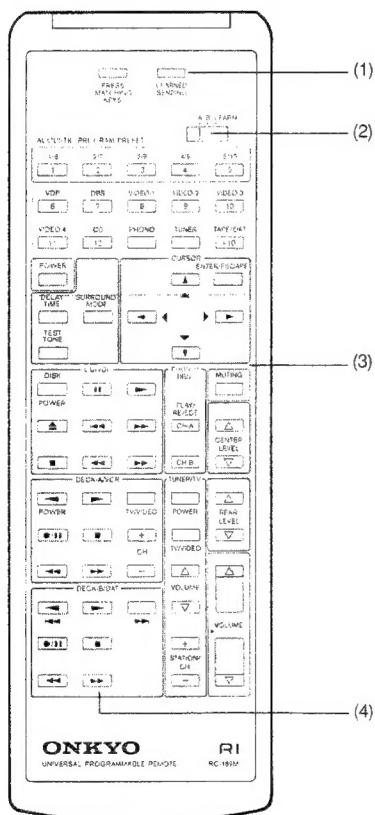
Seat Screen
Adjusts the apparent left and right seating position at the performance site.



Remote Control Transmitter

Notes

- Commands of systems with the Onkyo RI mark are already stored at the A position and part of the B section of the A/B/LEARN selector switch. There is no need to "learn" them. (The RI mark is Onkyo's own mark.)
- If necessary, all buttons except for center level Δ/∇ and rear level Δ/∇ can be placed in the memory with a different code. Blue characters are used to input codes into the memory. Set a code on your existing remote control to an appropriate blue character. When using the memory the A/B/LEARN switch must be on B.
- The output of most infrared remote control transmission units on the market today consists of a series of pulses (codes). By changing these codes, functions can be differentiated between products of different manufacturers. In order to operate certain functions, the codes of that particular unit have to be assigned the same code for the function to work correctly.



(1) Display Indicators (PRESS MATCHING KEYS, LEARNED/SENDING)

These indicators act as guides when this unit "learns" and "uses" commands. They also warn the user when an error is made or when battery power is low.

(2) A/B/Learn Selector Switch (A/B/LEARN)

Set this switch to A or B when operating. Set the switch to learn for memorizing other remote control codes.

(3) These buttons are for operating this model. They can be operated at either A or B settings of the A/B/LEARN switch (white characters). For a detailed description, see page 14.

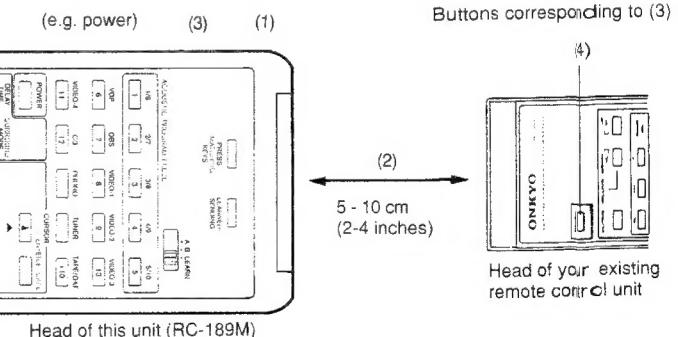
- These buttons are for operating other Onkyo products that have the RI mark (white characters). They can be operated with the A/B/LEARN switch set to A. (CD, Deck A, B, Phono). However, the deck B/DAT section can operate an Onkyo DAT deck with the RI mark with the A/B/LEARN switch set to B. In this case, buttons except for those with blue characters can be operated.
- For connections, please refer to the section "Connections for Remote Control". Consult your Onkyo service center for further details.

How to Learn

- Set the A/B/LEARN selector switch to LEARN.
- Place the head of your existing remote control unit 2 - 4 inches (5 - 10 cm) from the head of this unit, laying both units on a table or another flat surface.
- Press the button of this unit into which you want to memorize the code. The "press matching keys" indicator lights.
- Hold down the button you want to memorize on your existing remote control unit while the "press matching keys" indicator is lighted, until the "learned" indicator lights.
- To continue the process and memorize another key, repeat steps (3) - (4).

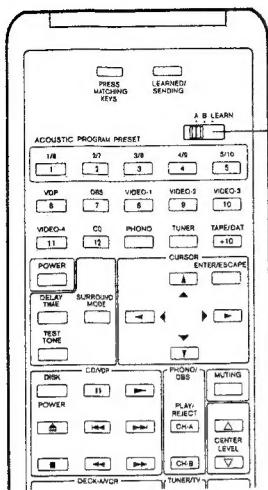
Notes

- Some remote controllers use a single button to change codes, with the code changing each time the button is pressed. If you are using this kind of controller, please perform "learn" functions for each of the buttons individually, one function to one RC-189M button.
- This remote control transmitter uses infrared rays. Most remote control codes can be memorized using the infrared system; however, depending on the degree to which the system differs, there are some rare occasions where memorization is not possible.



- Be sure to assign functions to the buttons with the corresponding function names and/or symbols. If functions and button names are different, the function which actually operates will be different from that which is displayed. For instructions regarding the operation of "learner" units, please refer to the individual instruction manuals for each product.
- Even after codes have been memorized, please keep your existing remote control transmitter in a safe place. If the memorized codes are lost when the batteries run down, etc., it will be necessary to memorize them once again using the existing remote control transmitter.

Operation



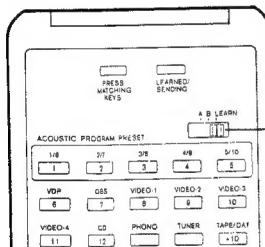
(1) A/B/LEARN selector switch to A or B

- Set the A/B/LEARN selector switch to A or B to the desired position. Then operate the remote control unit by pressing the buttons of the functions you want to use.
 - There is no power switch on the remote control transmitter. Power is supplied automatically when a button is pressed. If no button is pressed for a short interval, power goes off automatically, to avoid wasting the battery.
 - If you press a button at which no code has been memorized, the "learned/sending" indicator will not light up.

Note

Please check whether previously memorized functions are working properly. The sending indicator may not be illuminated with your existing remote control unit.

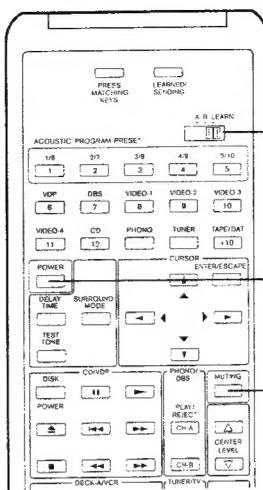
Changing Commands



(1) A/B/LEARN selector switch to LEARN

- Set the A/B/LEARN selector switch to LEARN.
- Commands should be memorized using the system outlined in section, "How to Learn." New codes of newly entered button only are modified, and the codes of previously memorized buttons are not modified.

How to Reset the RC-189M (Clearing All Memorized Commands)



(1) A/B/LEARN selector switch to LEARN

(2) POWER and audio muting

- Set the A/B/LEARN selector switch to LEARN.
- Hold down both the power button and the muting button at the same time. Continue holding these buttons down until the press matching keys indicator and learned/sending indicator light up and are then turned off.
 - When the indicators are turned off, the reset operation is completed.
 - When the B section is reset, the preset Onkyo codes will be recalled.

If the Indicators Flash

- During learning, the indicators flash when the same codes are stable and cannot be memorized multiple times. To ensure the reception of stable codes, place both remote control units on a table or other level surface and position them at a fixed distance and orientation.
- The indicators may flash in case an audio device can be controlled by the existing remote control unit but the codes cannot be memorized by the RC-189M. This is because the RC-189M requires highly stable transmission output for identifying codes. Replace the batteries of the existing remote control unit with new ones, then repeat the learning operation.
- If the indicators flash when a button is pressed, it means that the RC-189M batteries are worn out. Replace its batteries with new ones.

Troubleshooting Guide

NOTE:

If a problem occurs, first operate the unit using the front panel controls to confirm that it is not due to a malfunction (or worn out batteries) of the remote control transmitter.

Trouble	Cause	Remedy
Pressing the power switch does not supply power.	<ul style="list-style-type: none"> AC power plug not fully plugged in. The unit is plugged into a timer which is off. 	<ul style="list-style-type: none"> Firmly insert the plug into the AC outlet. Set the timer to on or plug the unit directly into an AC outlet.
No video or sound.	<ul style="list-style-type: none"> Signal cables not firmly connected. Signal cables incorrectly connected. Input selector not set for unit being played. 	<ul style="list-style-type: none"> Check that connections are secure. Check and connect the video and audio cables correctly. Check the connections and set the input selector accordingly.
Left/right speaker sound is absent or weak.	<ul style="list-style-type: none"> Speaker cable disconnected. Volume set to minimum. Muting is engaged. Headphones are connected. 	<ul style="list-style-type: none"> Inspect the connections between amplifier and speaker. Adjust for suitable volume. Press the muting button on the remote control transmitter to deactivate the mode. Reduce the volume setting and unplug the headphones.
Center speaker sound is absent or weak.	<ul style="list-style-type: none"> Surround mode set for bypass. Center level is at minimum. Center mode set for phantom during Dolby Pro Logic, Theater-1 or Theater-2. Single center speaker connected to dual terminals. 	<ul style="list-style-type: none"> Set for the surround mode. Adjust for suitable center level. Set center mode for normal or wideband. Connect to the single speaker terminals.
Rear speaker sound is absent or weak.	<ul style="list-style-type: none"> Surround mode set for bypass. Rear level is set to minimum. Pro Logic mode set for 3-channel logic. 	<ul style="list-style-type: none"> Set for the surround mode. Adjust for suitable rear level. Set for the Pro Logic mode.
Sound or picture cannot be recorded.	<ul style="list-style-type: none"> REC selector setting incorrect. 	<ul style="list-style-type: none"> Set the REC selector correctly (see page 18, 19).
No picture from TV set via S connector, or video recording to the video deck connected with S connector is not possible.	<ul style="list-style-type: none"> Player unit connected to normal video connector. 	<ul style="list-style-type: none"> A signal via the normal video connector is not obtained from the S connector. Either connect the player unit to the S connector or connect the TV set or video deck to the normal video connector.
The test tone does not work.	<ul style="list-style-type: none"> The surround mode is not set on Dolby Pro Logic, Theater-1, or Theater-2. 	<ul style="list-style-type: none"> Set the surround mode on Dolby Pro Logic, Theater-1, or Theater -2.

This amplifier employs a microcomputer to perform various functions and operations. If interference generated by an external power supply, radio waves, or other electrical source results in an accident which causes these operations and functions to operate abnormally, please reset this amplifier following the procedures below:

1. Disconnect the power cord from the supply and wait for 5 seconds, then connect the power cord again and enter the standby mode.
2. Press and hold down the SURROUND MODE ▶ button, then turn power switch ON. When the power is turned on, the display will show all the symbols for a short time. While these symbols are shown, continue pressing the SURROUND MODE ▶ button, and disconnect the power cord.
3. The display will briefly show "CLEAR" just before the power is completely turned off.
4. Re-connect the power cord. You will need to set all preset memories and the parameters like surround sound, as these data settings will all be initialized.

Specifications

AMPLIFIER SECTION

Power Output: BY-PASS (two channel stereo) mode
75 watts per channel min. RMS. at 8 ohms, both channels driven, from 20 Hz to 20,000 Hz, with no more than 0.06 % total harmonic distortion.
DOLBY PRO-LOGIC mode
85 watts per channel min. RMS. at 8 ohms, front L or R or C channel driven, 1,000 Hz with no more than 0.5 % total harmonic distortion.
35 watts per channel min. RMS. at 8 ohms, rear L and R channels driven, 1,000 Hz with no more than 1 % total harmonic distortion.
Total Harmonic Distortion: 0.06 % at rated power (BY-PASS mode)
IM Distortion: 0.06 % at rated power (BY-PASS mode)
Damping Factor: 90 at 8 ohms (FRONT)
Sensitivity and Impedance: PHONO: 5 mV/50 kohms
CD, TUNER, TAPE/DAT (PLAY),
VDP, DBS, VIDEO 1-4 (PLAY):
300 mV/50 kohms
TAPE/DAT, VIDEO 1-3 (REC):
300 mV/2.2 kohms
PREOUT/SUB WOOFER:
1 V/600 ohms
Phono overload: 110 mV RMS. at 1 kHz, 0.05 % THD.
Frequency Response: 2 to 100,000 Hz, +/-3 dB (BY-PASS mode)
Phono RIAA Deviation: 20 to 20,000 Hz, +/-0.8 dB
Tone Control:
BASS: +/-12 dB at 20 Hz
MID: +/-12 dB at 850 Hz
TREBLE: +/-12 dB at 20 kHz
Signal to Noise Ratio (BY-PASS mode):
PHONO : 80 dB
(IHF A, 5 mV input)
CD, VDP: 105 dB (IHF A)

VIDEO SECTION

Sensitivity and Impedance:
VDP, DBS, VIDEO 1-4 (PLAY) VIDEO input:
1 Vp-p, 75 ohms
VIDEO 1-3 (REC), MONITOR OUT VIDEO output:
1 Vp-p, 75 ohms
VDP, DBS, VIDEO 1, 2, 4 (PLAY) S-VIDEO input:
Y signal 1 Vp-p, 75 ohms
C signal 0.28 Vp-p, 75 ohms
VIDEO 1-2 (REC), MONITOR OUT S-VIDEO output:
Y signal 1 Vp-p, 75 ohms
C signal 0.28 Vp-p, 75 ohms

GENERAL

Power Supply:
USA and Canadian model:
AC 120 V, 60 Hz
Worldwide model:
AC 120 and 220 V
switchable, 50/60 Hz
Dimensions (W x H x D): 455 x 170 x 421 mm
17-15/16" x 6-11/16" x 16-9/16"
Weight: 17.5 kg., 38.6 lbs.

REMOTE CONTROL TRANSMITTER RC-189M

Transmitter: Infrared
Signal Range: Approx. 5 meters (16 ft. 4")
Power Supply: Two "AAA" batteries (1.5 V x 2)
Dimensions (W x H x D): 67 x 30 x 200 mm
2-5/8" x 1-3/16" x 7-7/8"
Weight: 150 grams, 5.3 oz.
(including batteries)

Specifications and features are subject to change without notice.